ExtremeXOS Release Notes

Software Version ExtremeXOS 12.3.4-patch1-3

Extreme Networks, Inc.
3585 Monroe Street
Santa Clara, California 95051
(888) 257-3000
(408) 579-2800
http://www.extremenetworks.com

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1 Overview

CHAPTER

These Release Notes document ExtremeXOS® 12.3.4, which introduces new software features.

This chapter contains the following sections:

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- Feature Enhancements in ExtremeXOS 12.3.3 on page 9
- Feature Enhancements in ExtremeXOS 12.3.1 on page 11
- Unsupported Features in ExtremeXOS 12.3.1 on the BlackDiamond 20808 Platform on page 13
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Feature and Feature Enhancements in ExtremeXOS 12.3.4

This section lists the features and feature enhancements supported in ExtremeXOS 12.3.4 software:

- Following are BlackDiamond 20800 series enhancements included in this release:
  - **New "install firmware verify" Command**—This command installs the firmware bundled with the ExtremeXOS image on BlackDiamond 20808 switches and checks status before and during installation.

install firmware verify

```
install firmware verify {abort-on-error}
```

Description

Installs the firmware bundled with the ExtremeXOS image on BlackDiamond 20808 switches and checks status before and during installation.

Syntax Description

abort-on-error	Specifies that the upgrade process is to abort and exit if any module fails during upgrade.

Default

When the `abort-on-error` option is not specified, any module that fails during upgrade is skipped and the installation process continues with the next module.

Usage Guidelines

On BlackDiamond 20808 switches, use the `install firmware verify` command to install firmware on the MMs, I/O modules, fabric modules, and the fan tray (through the PFC).

This command differs from the `install firmware` command in the following ways:

- It performs a pre-installation check to see that all modules are operational before starting the actual upgrade and asks for user confirmation to proceed after the check.
- While upgrading the modules, it ensures that a currently upgraded module comes back to an operational state before starting the upgrade of the next module. If a module becomes faulty during an upgrade, it reports the error to the user and continues with the next module, leaving the faulty module as it is.
- In a dual MM system, before upgrading the firmware on the master MM, it ensures the other MM is in backup and in-sync mode so that the reboot of the master module while upgrading its CFG FW will not lead to a whole system re-boot. Instead, a backup in-sync will take over.
- It takes more time because the system waits for every module to become operational after the firmware upgrade.

With the `abort-on-error` option, if any module becomes faulty while an upgrade is in progress, it will abort the install steps and exit leaving any remaining modules untouched.

Example

The following command installs the newer firmware image and checks for status:

```
install firmware verify
```

Following is sample output from this command:

```
(debug) BD-20808.4 #   install firmware verify
```

```
About to start Pre-Installation Checks for system


System has completed all Pre-Installation Checks


Would You Like to continue with firmware install?
? (y/N) Yes

********************************************************************************
*** Do NOT remove cards or power-off chassis while installation is in progress ***
********************************************************************************


Installing firmware...
SUCCESS: TRAY 1, Fantray Secondary image

Fantray firmware installed successfully for  Tray-1


Installing firmware...
SUCCESS: TRAY 2, Fantray Secondary image

Fantray firmware installed successfully for  Tray-2
Installing firmware...
SUCCESS: SLOT 1, Alfalfa Primary
SUCCESS: SLOT 2, Alfalfa Primary
SUCCESS: SLOT 3, Alfalfa Primary

Installing firmware...
UPGRADE NOT REQUIRED: SLOT 1, Pete Primary
UPGRADE NOT REQUIRED: SLOT 2, Pete Primary
UPGRADE NOT REQUIRED: SLOT 3, Pete Primary

Installing firmware...
UPGRADE NOT REQUIRED: SLOT 1, IO PMON Default Image
UPGRADE NOT REQUIRED: SLOT 2, IO PMON Default Image
UPGRADE NOT REQUIRED: SLOT 3, IO PMON Default Image

Installing firmware...
UPGRADE NOT REQUIRED: SLOT 1, Waldo Primary
UPGRADE NOT REQUIRED: SLOT 2, Waldo Primary

Installing firmware...
UPGRADE NOT REQUIRED: SLOT 3, Wheezer Primary


Installing firmware...
SUCCESS: SLOT 1, Aldrin uC Primary image

IO microcontroller firmware installed successfully for slot 1
IO microcontroller firmware will be activated upon next IO module reboot
IOM Slot-1 is not yet operational
IOM Slot-1 is not yet operational
IOM Slot-1 is not yet operational
IOM Slot-1 is in Operational state
```

```
IOM slot-1 firmware was installed successfully

Installing firmware...
SUCCESS: SLOT 2, Aldrin uC Primary image

IO microcontroller firmware installed successfully for slot 2
IO microcontroller firmware will be activated upon next IO module reboot
IOM Slot-2 is not yet operational
IOM Slot-2 is not yet operational
IOM Slot-2 is not yet operational
IOM Slot-2 is in Operational state
IOM slot-2 firmware was installed successfully

Installing firmware...
SUCCESS: SLOT 3, Edison uC Primary image

IO microcontroller firmware installed successfully for slot 3
IO microcontroller firmware will be activated upon next IO module reboot
IOM Slot-3 is not yet operational
IOM Slot-3 is not yet operational
IOM Slot-3 is not yet operational
IOM Slot-3 is not yet operational
IOM Slot-3 is in Operational state
IOM slot-3 firmware was installed successfully


Installing firmware...
SUCCESS: SLOT 19, Drake uC Primary image

Firmware installed successfully for FABRIC-1
FABRIC-1 is in Operational state
FABRIC-1 firmware was installed successfully

Installing firmware...
SUCCESS: SLOT 20, Drake uC Primary image

Firmware installed successfully for FABRIC-2
FABRIC-2 is in Operational state
FABRIC-2 firmware was installed successfully

……..

Installing firmware...
SUCCESS: SLOT 17, MM PMON
SUCCESS: SLOT 17, MM Spanky Primary
SUCCESS: SLOT 18, MM PMON
SUCCESS: SLOT 18, MM Spanky Primary

MSM firmware installed successfully
MSM firmware will be activated upon next MSM reboot

Installing firmware...
SUCCESS: SLOT 17, PFC uC Primary image
SUCCESS: SLOT 17, Tesla uC Primary image

CFG, PFC firmware installed successfully for slot 17
```

```
MM-17 is not yet operational
MM-17 is not yet operational
MM-17 is not yet operational
MM-17 is in Operational state
MM-17 node is BACKUP
MM-17 is not yet in-sync
MM-17 is in Operational state
MM-17 node is BACKUP
MM-17 is not yet in-sync
MM-17 is in Operational state
MM-17 node is BACKUP
MM-17 is not yet in-sync
MM-17 is in Operational state
MM-17 node is BACKUP
MM-17 is not yet in-sync
MM-17 is in Operational state
MM-17 node is BACKUP
MM-17 node is IN-SYNC
MM-17 was installed successfully


Installing firmware...
DEFERRED: SLOT 18, PFC uC Primary image
DEFERRED: SLOT 18, Tesla uC Primary image
SUCCESS: SLOT 18, PFC uC Primary image
..................
```

History

This command was first available in ExtremeXOS 12.3.4.

Platform Availability

This command is available only on BlackDiamond 20808 switches.

Feature Enhancements in ExtremeXOS 12.3.3

This section lists the feature enhancements supported in ExtremeXOS 12.3.3 software:

- Legacy CLI

  The Legacy Command Line Interface (CLI) feature enables those who have experience with legacy, mode-based CLIs to use familiar commands to start using the ExtremeXOS software using commands they already know. The Legacy CLI feature is distributed in a modular software package called an xmod file, which must be acquired separately from the ExtremeXOS software.

  The Legacy CLI feature enables configuration of most Layer 2 ExtremeXOS software features in Legacy CLI sessions. To configure Layer 3 features and any features not supported by Legacy CLI sessions, you must use the Extreme standard CLI session.

  See the *ExtremeXOS Legacy CLI Quick Reference Guide* for more details.

- Summit® X650 SummitStack Using VIM1-SummitStack512 Guidelines

  Before deploying a new stack with Summit X650 switches, consider the following guidelines:

- A Summit X650 switch must be the master node.
- A Summit X650 switch must be the backup node.
- To use the failover feature in the SummitStack, a second Summit X650 is required, and it must be the backup node.
- When the VIM1-SummitStack512 option card is installed in a Summit X650 switch, the maximum number of SummitStack nodes is 2, and both nodes must have VIM1-SummitStack512 option cards installed.

Note: For information on upgrading Summit X650 switches to use the VIM1-SummitStack512 option card, see "Upgrading a Summit X650 with a VIM1-SummitStack512" in the *ExtremeXOS 12.4 Concepts Guide*.

- To upgrade a Summit X650 in a SummitStack using the VIM1-SummitStack512 option card, do the following:

  a Upgrade the ExtremeXOS software on all SummitStack nodes to a version that supports VIM1-SummitStack512.

  b Power down the nodes to be upgraded.

  c Replace the VIMs to be upgraded with the new VIM1-SummitStack512 option cards.

  d Reconfigure the SummitStack so that there are no more than 2 Summit X650 switches with VIM1-SummitStack512 option cards in each stack.

  e Cable each new SummitStack as described in the Summit Family Switches Hardware Installation Guide.

  f Power up the upgraded nodes.

  g Check the license level of both Summit X650 switches.

```
* X650-24t(SS512).2 # show licenses
Enabled License Level:
Advanced Edge
Enabled Feature Packs:
Non
```

  h Configure the stacking license-level.

```
* X650-24t(SS512).4 # configure stacking license-level advanced-edge
This command will take effect at the next reboot of the specified node(s).
```

  i Use the `configure stacking easy-setup` command to set up the stack.

```
* X650-24t(SS512).5 # configure stacking easy-setup
For every node in the 2-node stack, this command will:
- enable stacking
- configure a stack MAC address
- choose and configure a slot number (this node will be assigned to slot 1)
- configure redundancy to minimal (slot 1 will be the master node)

Upon completion, the stack will automatically be rebooted into the new
configuration.
Warning: If stacking is already configured, this command will alter that
configuration.

Warning: There are unsaved configuration changes.  You may wish to save them
before proceeding.

Do you wish to proceed? (y/N) Yes

Stacking configuration is complete.  Rebooting...
```

NOTE

All four physical stack ports must be connected per the cabling guidelines in the VIM1 module installation note included in your VIM1 shipment. The ports must be operational in order to function properly.

```
* Slot-2 Stack.1 # show slot
Slots    Type                 Configured          State       Ports
------------------------------------------------------------------------
Slot-1   X650-24t(SS512)                          Operational   24
Slot-2   X650-24x(SS512)                          Operational   24
Slot-3                                            Empty          0
Slot-4                                            Empty          0
Slot-5                                            Empty          0
Slot-6                                            Empty          0
Slot-7                                            Empty          0
Slot-8                                            Empty          0

* Slot-2 Stack.2 # show  stacking
Stack Topology is a Ring
Active Topology is a Ring
Node MAC Address    Slot  Stack State  Role     Flags
------------------  ----  -----------  -------  ---
*00:04:96:35:9d:55  2     Active       Master   CA-
 00:04:96:1e:a8:02  1     Active       Backup   CA-
* - Indicates this node
Flags:  (C) Candidate for this active topology, (A) Active Node
        (O) node may be in Other active topology

* Slot-2 Stack.3 # show stacking stack-ports
Stack Topology is a Ring
Slot Port Node MAC Address  Port State  Flags Speed
---- ---- ----------------- ----------- ----- -----
*2   1    00:04:96:35:9d:55 Operational CB     128G
*2   2    00:04:96:35:9d:55 Operational C-     128G
 1   2    00:04:96:1e:a8:02 Operational C-     128G
 1   1    00:04:96:1e:a8:02 Operational CB     128G
* - Indicates this node
Flags:  (C) Control path is active, (B) Port is Blocked
```

- Connect stacking cables between two VIM1-SummitStack512 modules as follows:
  - Stack port 1 to stack port 1
  - Stack port 2 to stack port 2
  - Stack port 3 to stack port 3
  - Stack port 4 to stack port 4

  Any other connection order could result in an incorrect stacking topology and cause a non-deterministic traffic routing between the two Summit X650 series nodes.

Feature Enhancements in ExtremeXOS 12.3.1

This section lists the feature enhancements supported in ExtremeXOS 12.3.1 software:

- AES 128 Bit Encryption Support for ExtremeXOS SNMPv3.
- BGP Commands
  - `disable bgp advertise-inactive-route`
  - `enable bgp advertise-inactive-route`
  - `disable bgp neighbor originate-default`
  - `disable bgp peer-group originate-default`
  - `enable bgp neighbor originate-default`
  - `enable bgp peer-group originate-default`
  - `configure bgp maximum-paths`
  - `show bgp routes`
  - `configure bgp add aggregate-address`
  - `disable bgp export`
  - `enable bgp export`
- BGP Features
  - BGP ECMP
  - Blackhole Route Redistribution
  - Default Route Origination and Advertisement
  - Inactive Route Advertisement
  - Support for Overlapping Aggregate Routes
- BlackDiamond 8800 series switches and Summit family switches now support a strict-priority mode override for QoS profiles.
- BlackDiamond® 20808 now supports:
  - Anycast Rendezvous Point (RP)
  - Connectivity Fault Management (CFM)
  - CPU Monitor
  - Dynamic Access Control List (ACL)
  - Egress Mirroring
  - Extreme Standby Router Protocol (ESRP) Redundant Access
  - Hierarchical Quality of Service (H-QoS) Bandwidth Mode
  - Hierarchical Virtual Private LAN Services (H-VPLS)
  - Link Layer Discovery Protocol (LLDP)
  - Multicast Source Discovery Protocol (MSDP)
  - Multiprotocol BGP (MBGP)
  - Multiprotocol Label Switching (MPLS)
    - Fast reroute (FRR)
    - LSPs and PWs over Link Aggregation Trunk Ports
    - MPLS Label Experimental (EXP) Bit Replacement and Classification
    - Resource ReSerVation Protocol-Traffic Engineering (RSVP-TE)
    - Static Label Switched Paths (LSPs)
  - Private VLAN and VLAN Translation
  - Remote Mirroring
  - Virtual Private LAN Services (VPLS) EXP bit examination and replacement

  - VLAN Aggregation
- Cut-Through Switching Mode for Summit X650, SummitStack with Summit X650, BlackDiamond 8900 Series I/O Modules and MSM Modules.
- Egress ACLs for the Summit X650 and BlackDiamond 8800 and 8900 c-series Modules.
- Ethernet in the First Mile (EFM) Operation, Administration and Maintenance (OAM)—Unidirectional Link Fault Management for Summit X450 a-series switch fiber ports.
- Flow Control—Summit® Family of Switches and BlackDiamond 8800 Series Switches only
  - `disable flow-control rx-pause ports`
  - `disable flow-control tx-pause ports`
  - `enable flow-control rx-pause ports`
  - `enable flow-control tx-pause ports`
- Health Check Link Aggregation

  The Health Check LAG application allows you to create a link aggregation group where individual member links can monitor a particular TCP IP address and TCP port. When connectivity to the TCP IP address and TCP port fails, the member link is removed from the link aggregation group.
- MAC Address Tracking Feature—The new MAC Address Tracking feature tracks FDB add, move, and delete events for specified MAC addresses. When an event occurs, the software generates an EMS message, updates internal event counters, and can optionally send an SNMP trap. You can use this feature with the Universal Port feature to configure the switch in response to MAC address change events.
- New FEFI CLI Command

  The following CLI command enables and disables far-end-fault-indication (FEFI):

  `configure ports far-end-fault-indication`
- Option 82 Customizable String for Circuit ID.
- STP and Network Login Enhancements
  - Spanning Tree Protocol (STP) and network login work on the same port with or without edge safeguard.
  - Only network login ISP mode works when STP and network login are enabled together on a port.
- A new "custom" algorithm is supported for load-sharing groups for the BlackDiamond 8800 series switch, Summit X650, and SummitStack™.
- The `show igmp snooping cache` and `show mvr cache` commands have changed.
- Virtual router support is now available on Summit X650 switches and BlackDiamond 8800 and 8900 c-series modules.

Unsupported Features in ExtremeXOS 12.3.1 on the BlackDiamond 20808 Platform

Following are the features that are not supported on the BlackDiamond 20808 platform:

NOTE

Some of these features, such as CLEAR-Flow, are supported in a different manner on the BlackDiamond 20808 platform compared to the Extreme Networks legacy platforms (BlackDiamond 12800 and BlackDiamond

10800 switches). If you need any of the following features to meet a customer RFP, contact Product Management in Santa Clara.

- Backbone Bridge-Traffic Engineering (PBB-TE)
- CLEAR-Flow
- Directed Broadcast
- Disable Learning
- Fast-direct Broadcast
- Ignore-broadcast
- Protocol-based VLANs
- IP Address Security
- IPv6-in-IPv4 Tunneling
- IPv6 ACL
- IPv6 Equal Cost Multipath (ECMP)
- IPv6 Intermediate System-Intermediate System (IS-IS)
- IPv6 Multicast Listener Discovery v1 (MLDv1)
- IPv6 Multicast
- IPv6 Routing Information Protocol Next Generation (RIPng)/Open Shortest Path First (OSPFv3)
- IPv6 Routing protocol
- MAC Limiting on a Port or a Virtual Port (only limiting on a VLAN is supported)
- MAC Security
  - MAC Learning Lockdown
  - MAC Lockdown
- Multiprotocol Label Switching (MPLS)
  - VPLS Packet/Byte Counts Maintained for First 1,000 Pseudo Wires (PWs) Only
  - Packet/Byte Egress Counts for PWs
  - Packet Byte Counts for LSPs
- Network Login—802.1x, MAC-based, and Web-based
- Provider Backbone Bridge (PBB) including CFM and MAC-in-MAC
- Policy-based routing (PBR)
  - PBR for Layer 2
  - PBR Multi Next Hop (PBR_MULTINXTHOP)
- sFlow
- Unicast Reverse Path Forwarding (uRPF)
- User Datagram Protocol (UDP) Forwarding
- USB Port Support
- VPLS/QoS
- VPLS/LAG
- 64,000 Virtual Local Area Networks (VLANs)

New Hardware Supported in ExtremeXOS 12.3.4

The following module is supported in ExtremeXOS 12.3.4:

- 8900-10G24X-c (800371-00)

In order to recognize the 8900-10G24X-c I/O module, a BlackDiamond 8800 series or 8900 series MSM requires a specific minimum version of ExtremeXOS® software. The required software version depends on the manufacturing part number of the module (see Table 1).

Table 1: Required Minimum Software Versions

Manufacturing Part Number	Minimum Software Version
800264-00	ExtremeXOS 12.3.1 (or later)
800371-00	ExtremeXOS 12.3.4 (or later) NOTE: ExtremeXOS versions from 12.3.1 through 12.3.3 allow the 800371-00 module to become operational, but it will fail diagnostics.

You must upgrade the software to the minimum ExtremeXOS release that supports your module. Be sure to upgrade the software on your MSM before installing the 8900-10G24X-c I/O module into your network.

CAUTION

If you try to install an 8900-10G24X-c I/O module without upgrading the software on your MSM to version 12.3.1 or later, the module will not be recognized by the software and it will not power up. The following error messages are typical of the messages that you may see on the console or in the log. (The examples represent an unrecognized module in slot 2.)

- Console: `ERROR: Unknown cardtype in slot 2 - please program the eeprom`
- Log: `<Erro:HAL.Card.Error> MSM-A: Unable to read cardtype for slot 2`

New Hardware Supported in ExtremeXOS 12.3.3

The following modules are supported in ExtremeXOS 12.3.3:

- Summit X650 series switches VIMs:
  - VIM1-SummitStack512 (VIM1-SS512)

New Hardware Supported in ExtremeXOS 12.3.2

The following module is supported in ExtremeXOS 12.3.2:

- 8900-G96T-c module

New Hardware Supported in ExtremeXOS 12.3.1

The following modules are supported in ExtremeXOS 12.3.1:

- BlackDiamond 8500 and 8900 modules for the BlackDiamond 8000 series switches:
  - 8500-MSM24
  - 8500-G48T-e
  - 8500-G24X-e
  - 8900-MSM128
  - 8900-10G24X-c module

Supported Hardware

Refer to the Extreme Networks hardware installation guides for more information about supported hardware. The following tables list the software filenames for the hardware that requires software.

BlackDiamond 8800 Series of Switches Component Support

BlackDiamond 8810 and BlackDiamond 8806 components supported with ExtremeXOS 12.3.4, and the minimum BootROM version required by the chassis to support each component, include:

Table 2: BlackDiamond 8800 Series of Switches Component Support

BlackDiamond 8810 and BlackDiamond 8806 Components	ExtremeXOS Filenames	ExtremeXOS Required	BootROM Version
MSM-G8X	bd8800-12.3.4.12-patch1-3.xos	11.1.1.9	1.0.1.7
MSM-48	bd8800-12.3.4.12-patch1-3.xos	11.6.1.9	1.0.1.11
MSM-48c	bd8800-12.3.4.12-patch1-3.xos	12.1.1.4	1.0.3.7
8500-MSM24	bd8800-12.3.4.12-patch1-3.xos	12.3.1	1.0.4.2
8500-G48T-e	N/A	12.3.1	1.0.4.0
8500-G24X-e	N/A	12.3.1	1.0.4.0
8900-MSM128	bd8800-12.3.4.12-patch1-3.xos	12.3.1	1.0.4.2
8900-10G24X-c (800264-00)	N/A	12.3.1	1.0.1.0
8900-10G24X-c (800371-00)	N/A	12.3.4	1.0.1.0
8900-G96T-c	N/A	12.3.2	1.0.1.0
G48Te	N/A	11.5.1.4	1.0.1.10
G48Pe	N/A	11.5.1.4	1.0.1.10
G48Ta	N/A	11.5.1.4	1.0.1.10
G48Xa	N/A	11.5.1.4	1.0.1.10
G48P	N/A	11.1.1.9	1.0.1.7
G48T	N/A	11.1.1.9	1.0.1.7
G48Tc	N/A	12.1.1.4	1.0.3.7
G48Te2	N/A	12.1.1.4	1.0.3.7
G48Xc	N/A	12.1.1.4	1.0.3.7

Table 2: BlackDiamond 8800 Series of Switches Component Support (Continued)

BlackDiamond 8810 and BlackDiamond 8806 Components	ExtremeXOS Filenames	ExtremeXOS Required	BootROM Version
G24X	N/A	11.1.1.9	1.0.1.7
G24Xc	N/A	12.1.1.4	1.0.3.7
S-G8Xc	N/A	12.1.1.4	1.0.3.7
10G4X	N/A	11.1.1.9	1.0.1.7
10G4Xa	N/A	11.6.1.9	1.0.1.11
10G4Ca	N/A	12.0.1.11	1.0.1.11
10G4Xc	N/A	12.1.1.4	1.0.3.7
10G8Xc	N/A	12.1.1.4	1.0.3.7
S-10G1Xc	N/A	12.1.1.4	1.0.3.7
PSU Controller	N/A	11.1.1.9	2.18
700/1200 W AC PSU (Model # 60020/PS 2336)	N/A	11.1.1.9	N/A
600/900 W AC PSU (Model # 41050/PS 2431) (BlackDiamond 8806 only)	N/A	11.6.1.9	N/A
1200 W DC PSU (Model # 60021/PS 2350)	N/A	11.3.2.6	N/A

NOTE

Upgrading the BootROM on a BlackDiamond 8810 or BlackDiamond 8806 switch is not automatic when you upgrade the software. You must be running the minimum required BootROM version or later. Use the install firmware command after upgrading the ExtremeXOS image to insure the BootROM is at the latest level.

BlackDiamond 10808 Switch Component Support

BlackDiamond 10808 components supported with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required by the chassis to support each component, include:

Table 3: BlackDiamond 10808 Component Support

BlackDiamond Component	ExtremeXOS Filenames	ExtremeXOS Required	BootROM Version
MSM-1	bd10k-12.3.4.12-patch1-3.xos	10.1.0	1.0.1.5
MSM-1XL	bd10k-12.3.4.12-patch1-3.xos	10.1.0	1.0.1.5
10G2X	N/A	11.1.1	1.3.0.0
10G2H	N/A	11.2.0	1.3.0.0
10G6X	N/A	10.1.0	1.3.0.0
G20X	N/A	11.1.1	1.3.0.0
G60X	N/A	10.1.0	1.3.0.0
G60T	N/A	10.1.0	1.3.0.0
PSU Controller	N/A	10.1.0	N/A

Table 3: BlackDiamond 10808 Component Support (Continued)

BlackDiamond Component	ExtremeXOS Filenames	ExtremeXOS Required	BootROM Version
700/1200 W AC PSU (Model # 60020/PS 2336)	N/A	10.1.0	N/A
1200 W DC PSU (Model # 60021/PS 2350)	N/A	11.3.2.6	N/A

Following are the part numbers for the BlackDiamond 10808 modules with the Rev. D ASIC:

Table 4: BlackDiamond 10808 I/O Modules with Part Numbers

I/O Module	8000 Level Part No.	9000 Level Part No.	Description	ExtremeXOS Required
G60T	804403-00, after Rev. 16	904015-00	BlackDiamond 10808 60-port 10/100/ 1000BASE-T RJ-45 Module	11.2.1.3
	804408-00, after Rev. 03	904015-10	BlackDiamond 10808 60-port 10/100/ 1000BASE-T RJ-45 Module	11.2.1.3
G60X	804402-00, after Rev. 16	904009-00/11	BlackDiamond 10808 60-port 1000BASE-X SFP (mini-GBIC) Module	11.2.1.3
	804404-00, after Rev. 03	904009-10	BlackDiamond 10808 60-port 1000BASE-X SFP (mini-GBIC) Module	11.2.1.3
G20X	804407-00, after Rev. 03	904020-10	BlackDiamond 10808 20-port 1000BASE-X SFP (mini-GBIC) Module	11.2.1.3
	804470-00, after Rev. 08	904020-00/11	BlackDiamond 10808 20-port 1000BASE-X SFP (mini-GBIC) Module	11.2.1.3
10G2X	804410-00, after Rev. 03	904032-10	BlackDiamond 10808 2-port 10GBASE-X XENPAK Module	11.2.1.3
	804471-00, after Rev. 11	904032-00/11	BlackDiamond 10808 2-port 10GBASE-X XENPAK Module	11.2.1.3
10G2H	804406-00, after Rev. 09	904027-00/11	BlackDiamond 10808 Hybrid Module (2-port 10GBASE-X XENPAK, 20-port 1000BASE-X SFP, 20-port 10/100/1000BASE-T RJ-45)	11.2.1.3
	804411-00, after Rev. 03	904027-10	BlackDiamond 10808 Hybrid Module (2-port 10GBASE-X XENPAK, 20-port 1000BASE-X SFP, 20-port 10/100/1000BASE-T RJ-45)	11.2.1.3
10G6X	804405-00, after Rev. 18	904016-00/11	BlackDiamond 10808 6-port 10GBASE-X XENPAK Module	11.2.1.3
	804409-00, after Rev. 03	904016-10	BlackDiamond 10808 6-port 10GBASE-X XENPAK Module	11.2.1.3

BlackDiamond 12800 Series Switches Component Support

BlackDiamond 12802, BlackDiamond 12804, BlackDiamond 12802 R-Series, and BlackDiamond 12804 R-Series components supported with ExtremeXOS 12.3.4, and the minimum BootROM version required by the chassis to support each component, include:

Table 5: BlackDiamond 12800 Series Switches Component Support

BlackDiamond 12802/12804 Components	ExtremeXOS Filenames	ExtremeXOS Required	BootROM Version
MSM-5R (BlackDiamond 12804)	bd12k-12.3.4.12-patch1-3.xos	11.4.1.4	1.0.0.2
MSM-5 (BlackDiamond 12804)	bd12k-12.3.4.12-patch1-3.xos	11.4.1.4	1.0.0.2
MSM-5 (BlackDiamond 12802)	bd12k-12.3.4.12-patch1-3.xos	12.0.1.11	1.0.0.2
MSM-6R	bd12k-12.3.4.12-patch1-3.xos	12.0.2.25	1.0.1.8
MSM-5R (BlackDiamond 12802)	bd12K-12.3.4.12-patch1-3.xos	12.0.1.11	1.0.0.2
XM-2X	N/A	12.2.2	N/A
XM-2XR	N/A	11.4.1.4	N/A
XM-2HR	N/A	12.1.1.4	N/A
GM-20XTR	N/A	11.4.1.4	N/A
GM-20XT	N/A	11.4.1.4	N/A
GM-20T	N/A	11.4.1.4	N/A
PSU Controller	N/A	11.4.1.4	2.13
700/1200 W AC PSU (Model # 60020/PS 2336)	N/A	11.4.1.4	N/A
1200 W DC PSU (Model # 60021/PS 2350)	N/A	11.4.1.4	N/A

BlackDiamond 20808 Switch Component Support

BlackDiamond 20808 switch components supported with ExtremeXOS 12.3.4, and the minimum BootROM version required by the chassis to support each component, include:

Table 6: BlackDiamond 20808 Switch Component Support

BlackDiamond 20808 Components	ExtremeXOS Filenames	ExtremeXOS Required	Firmware Version
GM-40X	N/A	12.3.2	
uC			2.2
FPGA:A			0.0.35
FPGA: P			0.0.6
FPGA: W1 & W2			0.0.d
BootROM			0.0.3.5
XM-8X	N/A	12.3.2	
uC			2.2
FPGA:A			0.0.35
FPGA: P			0.0.6
FPGA: D1 and D2 (manual upgrade)			0.0.b
FPGA: WH			0.0.9
BootROM			0.0.3.5
XFM-1 (shown as Fabric-1 through Fabric-5)	N/A	12.3.2	
uC			2,2

Table 6: BlackDiamond 20808 Switch Component Support (Continued)

BlackDiamond 20808 Components	ExtremeXOS Filenames	ExtremeXOS Required	Firmware Version
MM Basic	bd20k-12.3.4.12-patch1-3.xos	12.3.2	
uC			2.2
FPGA: S			0.3.C
BootROM			0.0.1.9
PSUCTRL			2,4
Fan Tray	N/A	12.3.2	
uC (shown as “Revision”)			2.3

NOTE

Use the `show version detail` command to see the firmware version. Use the `show fans` command to see the fan tray version and to ensure that all fans are operational before running the `install firmware` command. Use the `show slots` command to see which slots are operational.

Summit X150 and X350 Component Support

Summit X150 and X350 series components supported with ExtremeXOS 12.3.4, and the minimum BootROM version required by the switch to support each component, include:

Table 7: Summit X150 and X350 Component Support

Summit X150 and X350 Components	ExtremeXOS Filenames	Minimum ExtremeXOS Required	Minimum BootROM Version
Summit X150-24t	summitX-12.3.4.12-patch1-3.xos	12.0.2.25	1.0.3.1
Summit X150-48t	summitX-12.3.4.12-patch1-3.xos	12.0.2.25	1.0.3.1
Summit X150-24p	summitX-12.3.4.12-patch1-3.xos	12.0.2.25	1.0.3.1
Summit X350-24t	summitX-12.3.4.12-patch1-3.xos	12.0.3.16	1.0.3.1
Summit X350-48t	summitX-12.3.4.12-patch1-3.xos	12.0.3.16	1.0.3.1
XGM2-2sf (Summit X350 only)	summitX-12.3.4.12-patch1-3.xos	12.2.1	N/A
XGM2-2bt (Summit X350 only)	summitX-12.3.4.12-patch1-3.xos	12.2.1	N/A

Summit X250e Component Support

Summit X250e components supported with ExtremeXOS 12.3.4, and the minimum BootROM version required by the switch to support each component, include:

Table 8: Summit X250e Component Support

Summit X250 Components	ExtremeXOS Filenames	Minimum ExtremeXOS Required	Minimum BootROM Version
Summit X250e-24p	summitX-12.3.4.12-patch1-3.xos	12.0.1.11	1.0.3.0
Summit X250e-48p	summitX-12.3.4.12-patch1-3.xos	12.0.1.11	1.0.3.0
Summit X250e-24t	summitX-12.3.4.12-patch1-3.xos	12.0.1.11	1.0.3.0
Summit X250e-48t	summitX-12.3.4.12-patch1-3.xos	12.0.1.11	1.0.3.0
Summit X250e-24x	summitX-12.3.4.12-patch1-3.xos	12.0.2.25	1.0.3.1
Summit X250e-24tDC	summitX-12.3.4.12-patch1-3.xos	12.0.3.16	1.0.3.1
Summit X250e-24xDC	summitX-12.3.4.12-patch1-3.xos	12.0.3.16	1.0.3.1
Summit X250e-48tDC	summitX-12.3.4.12-patch1-3.xos	12.0.3.16	1.0.3.1

Summit X450 Component Support

Summit X450 components supported with ExtremeXOS 12.3.4, and the minimum BootROM version required by the switch to support each component, include:

Table 9: Summit X450 Component Support

Summit X450 Components	ExtremeXOS Filenames	Minimum ExtremeXOS Required	Minimum BootROM Version
Summit X450a Series			
Summit X450a-48t	summitX-12.3.4.12-patch1-3.xos	11.5.1.4	1.0.2.2
Summit X450a-48tDC	summitX-12.3.4.12-patch1-3.xos	11.6.1.9	1.0.2.2
Summit X450a-24t	summitX-12.3.4.12-patch1-3.xos	11.5.1.4	1.0.2.2
Summit X450a-24tDC	summitX-12.3.4.12-patch1-3.xos	11.5.1.4	1.0.2.2
Summit X450a-24xDC	summitX-12.3.4.12-patch1-3.xos	11.6.1.9	1.0.2.2
Summit X450a-24x	summitX-12.3.4.12-patch1-3.xos	11.6.1.9	1.0.2.2
Summit X450e Series			
Summit X450e-24p	summitX-12.3.4.12-patch1-3.xos	11.5.1.4	1.0.2.2
Summit X450e-48p	summitX-12.3.4.12-patch1-3.xos	11.6.1.9	1.0.2.2
Summit X450 Series			
Summit X450-24x	summitX-12.3.4.12-patch1-3.xos	11.2.2.4	1.0.0.9
Summit X450-24t	summitX-12.3.4.12-patch1-3.xos	11.2.2.4	1.0.0.9
Option Cards			
XGM-2xn	summitX-12.3.4.12-patch1-3.xos	N/A	N/A
XGM2-2xn (Summit X450a and X450e series only)	summitX-12.3.4.12-patch1-3.xos	11.5.1.4	
XGM2-2xf (Summit X450a and X450e series only)	summitX-12.3.4.12-patch1-3.xos	11.5.1.4	
XGM2-2sf (Summit X450a and X450e series only)	summitX-12.3.4.12-patch1-3.xos	12.2.1	

Table 9: Summit X450 Component Support

Summit X450 Components	ExtremeXOS Filenames	Minimum ExtremeXOS Required	Minimum BootROM Version
XGM2-2bt (Summit X450a and X450e series only)	summitX-12.3.4.12-patch1-3.xos	12.2.1	

Summit X650 Component Support

Summit X650 components supported with ExtremeXOS 12.3.4, and the minimum BootROM version required by the chassis to support each component, include:

Table 10: Summit X650 Component Support

Summit X650 Components	ExtremeXOS Filenames	Minimum ExtremeXOS Required	Minimum BootROM Version
Summit X650-24x	summitX-12.3.4.12-patch1-3.xos	12.2.1	1.0.5.5
Summit X650-24t	summitX-12.3.4.12-patch1-3.xos	12.2.2	1.0.5.5
VIM1-SummitStack	summitX-12.3.4.12-patch1-3.xos	12.2.1	N/A
VIM1-10G8X	summitX-12.3.4.12-patch1-3.xos	12.2.2	N/A
VIM1-SummitStack512	summitX-12.3.4.12-patch1-3.xos	12.3.3	N/A

NOTE

Upgrading the BootROM on Summit family switches is not automatic when you upgrade the software.You must be running the minimum required BootROM version. Use the `download bootrom` command to download a BootROM image.

SFP (Mini-GBIC) Support

SFPs supported on the BlackDiamond 8810 and BlackDiamond 8806 switches with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 11: BlackDiamond 8800 Series of Switches SFP Support

SFP	ExtremeXOS Required
1000BASE-T SFP	11.1.1.9
SX SFP	11.1.1.9
LX SFP	11.1.1.9
ZX SFP	11.1.1.9
100FX/1000LX SFP	11.3.1.3
100FX SFP	11.4.3.4 or 11.5.2.10 (not supported in 11.5.1.4)
1000BX SFP	11.4.1.4
LX100 SFP	12.0.1.11
10/100/1000BASE-T Copper SFP	12.0.2.25

Table 12: BlackDiamond 8800 Series of Switches SFP+ Support

SFP	ExtremeXOS Required
ER SFP+	12.3.3
SR SFP+	12.3.1
LR SFP+	12.3.1
SFP+ twin coax cable	12.3.1

SFPs supported on the BlackDiamond 10808 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include

Table 13: BlackDiamond 10808 Switch SFP Support

SFP	ExtremeXOS Required
LX100 SFP	12.0.1.11
SX SFP	10.1.0
LX SFP	10.1.0
ZX SFP	10.1.0
1000BASE-T SFP	11.1.1.9
1000BX SFP	11.6.1.9

SFPs supported on the BlackDiamond 12804 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 14: BlackDiamond 12804 Switch SFP Support

SFP	ExtremeXOS Required
SX SFP	11.4.1.4
LX SFP	11.4.1.4
ZX SFP	11.4.1.4
1000BASE-T SFP	11.4.1.4
1000BX SFP	11.6.1.9
LX100 SFP	12.0.1.11
100FX/1000LX SFP	11.6.1.9

SFPs supported on the BlackDiamond 12802 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 15: BlackDiamond 12802 Switch SFP Support

SFP	ExtremeXOS Required
SX SFP	12.0.1.11
LX SFP	12.0.1.11
ZX SFP	12.0.1.11
1000BASE-T SFP	12.0.1.11
1000BX SFP	12.0.1.11
LX100 SFP	12.0.1.11
100FX/1000LX SFP	12.0.1.11

SFPs supported on the BlackDiamond 20808 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 16: BlackDiamond 20808 Switch SFP Support

SFP	ExtremeXOS Required
SX SFP	12.2
LX SFP	12.2
ZX SFP	12.2
LX100	12.2
BXU	12.2
BXD	12.2

SFPs supported on the Summit X150 series switches with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 17: Summit X150 Series Switches SFP Support

SFP	ExtremeXOS Required
100BASE-FX (P/N 10067)	12.0.2.25
100BASE-BX SFP	12.0.2.25
100BASE LX10 SFP	12.0.2.25
SX SFP	12.0.2.25
LX SFP	12.0.2.25
ZX SFP	12.0.2.25
LX100 SFP	12.0.2.25
1000BX SFP	12.0.2.25

SFPs supported on the Summit X250e switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 18: Summit X250e SFP Support

SFP	ExtremeXOS Required
SX SFP, ports 25 and 26	12.0.2.25
LX SFP, ports 25 and 26	12.0.2.25
ZX SFP, ports 25 and 26	12.0.2.25
LX100 SFP, ports 25 and 26	12.0.2.25
1000BX SFP, ports 25 and 26	12.0.2.25
100BASE FX SFP (P/N 10067), ports 1 through 26	12.0.2.25
100BASE BX SFP, ports 1 through 26	12.0.2.25
100BASE LX10 SFP, ports 1 through 26	12.0.2.25

SFPs supported on the Summit X350 series switches with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

NOTE

The XGM2-2sf ports are 10Gb SFP+ ports and do not support 1Gb optics (PD4-739782255).

Table 19: Summit X350 Series Switches SFP/SFP+ (XGM2-2sf Option Card Required) Support

SFP	ExtremeXOS Required
SX SFP	12.0.3.16
LX SFP	12.0.3.16
ZX SFP	12.0.3.16
LX100 SFP	12.0.3.16
1000BX SFP	12.0.3.16
ER SFP+	12.3.3
SR SFP+	12.2.1
LR SFP+	12.2.1
SFP+ twin coax cables	12.2.1

SFPs supported on the Summit X450 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 20: Summit X450 Switch SFP Support

SFP	ExtremeXOS Required
10/100/1000BASE-T Copper SFP **Note**: Not supported on combo ports.	12.0.2.25
SX SFP	11.2.2.4
LX SFP	11.2.2.4
ZX SFP	11.2.2.4
1000BASE-T SFP	11.2.2.4
100FX SFP (P/N 10063) **Note**: Not supported on combo ports.	11.4.3.4 or 11.5.2.10 (not supported in 11.5.1.4)
100FX/1000LX SFP **Note**: Not supported on combo ports.	11.3.1.3
LX100 SFP	12.0.1.11
1000BX SFP	11.6.1.9

SFPs supported on the Summit X450a switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

NOTE

The XGM2-2sf ports are 10Gb SFP+ ports and do not support 1Gb optics (PD4-739782255).

Table 21: Summit X450a Switch SFP/SFP+ (XGM2-2sf Option Card Required) Support

SFP	ExtremeXOS Required
10/100/1000BASE-T Copper SFP **Note**: Not supported on combo ports.	12.0.2.25
SX SFP	11.2.2.4
LX SFP	11.2.2.4
ZX SFP	11.2.2.4
ER SFP+	12.3.3
SR SFP+	12.2.1
LR SFP+	12.2.1
SFP+ twin coax cables	12.2.1
100FX SFP (P/N 10063) **Note**: Not supported on combo ports.	11.6.1.9
100FX/1000LX SFP • Summit X450a-24x, ports 1 through 20 **Note**: Not supported on combo ports.	11.6.1.9
LX100 SFP	12.0.1.11
1000BX SFP	11.6.1.9

SFPs supported on the Summit X450e switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

NOTE

The XGM2-2sf ports are 10Gb SFP+ ports and do not support 1Gb optics (PD4-739782255).

Table 22: Summit X450e Switch SFP/SFP+ (XGM2-2sf Option Card Required) Support

SFP	ExtremeXOS Required
SX SFP	11.6.1.9
LX SFP	11.6.1.9
ZX SFP	11.6.1.9
LX100 SFP	12.0.1.11
1000BX SFP	11.6.1.9
ER SFP+	12.3.3
SR SFP+	12.2.1
LR SFP+	12.2.1
SFP+ twin coax cables	12.2.1

SFPs supported on the Summit X650 series switches with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 23: Summit X650 Series Switches SFP/SFP+ Support

SFP/SFP+	ExtremeXOS Required
SR SFP+, ports 1 through 24, and ports 25 through 32 (for the VIM1-10G8X)	12.2.2
LR SFP+, ports 1-24 and 25-32 for VIM1-10G8X	12.2.2
SFP+ twin coax cable - 1-24 and 25-32 for VIM1-10G8X	12.2.2
10/100/1000BASE-T SFP+ Copper—1000 speed support only **Note:** Not supported on port 23 and 24	12.3.3
ER SFP+	12.3.3
1000BX SFP, not supported on ports 23, 24	12.2.1
1000SX SFP, not supported on ports 23, 24	12.2.1
1000LX SFP, not supported on ports 23, 24	12.2.1
1000 BASE-T SFP, not supported on ports 23, 24	12.3.1
LX100 SFP, not supported on ports 23, 24	12.2.1
ZX SFP, not supported on ports 23, 24	12.2.1

XENPAK Module Support

XENPAK modules supported on the BlackDiamond 8800 series of switches with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 24: BlackDiamond 8800 Series of Switches XENPAK Support

XENPAK Module	ExtremeXOS Required
LR	11.1.1.9
ER	11.1.1.9
SR	11.1.1.9
LX4	11.3.1.3
ZR	11.3.1.3
CX4	12.0.1.11

XENPAK modules supported on the BlackDiamond 10808 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 25: BlackDiamond 10808 Switch XENPAK Support

XENPAK Module	ExtremeXOS Required
LR	11.1.1.9
ER	11.1.1.9
SR	11.1.1.9
LX4	11.3.1.3
ZR	11.3.1.3
LW	11.4.1.4

XENPAK modules supported on the BlackDiamond 12804 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 26: BlackDiamond 12804 Switch XENPAK Support

XENPAK Module	ExtremeXOS Required
LR	11.4.1.4
ER	11.4.1.4
SR	11.4.1.4
LX4	11.4.1.4
ZR	11.4.1.4
LW	11.4.1.4

XENPAK modules supported on the BlackDiamond 12802 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include

Table 27: BlackDiamond 12802 Switch XENPAK Support

XENPAK Module	ExtremeXOS Required
LR	12.0.1.11
ER	12.0.1.11
SR	12.0.1.11
LX4	12.0.1.11
ZR	12.0.1.11
LW	12.0.1.11

XENPAK modules supported on the Summit X450 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 28: Summit X450 Switch XENPAK Support

XENPAK Module	ExtremeXOS Required
SR	11.3.1.3
LR	11.3.1.3
ER	11.3.1.3
LX4	11.3.1.3
ZR	11.3.1.3

XENPAK modules supported on the Summit X450a switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 29: Summit X450a Switch XENPAK Support

XENPAK Module	ExtremeXOS Required
SR	11.6.1.9
LR	11.6.1.9
ER	11.6.1.9
LX4	11.6.1.9
ZR	11.6.1.9

Table 29: Summit X450a Switch XENPAK Support (Continued)

XENPAK Module	ExtremeXOS Required
LW	11.6.1.9
CX4	12.0.1.11

XENPAK modules supported on the Summit X450e switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 30: Summit X450e Switch XENPAK Support

XENPAK Module	ExtremeXOS Required
SR	11.5.1.4
LR	11.5.1.4
ER	11.5.1.4
LX4	11.5.1.4
ZR	11.5.1.4
CX4	12.0.1.11

XENPAK modules supported on the Summit X350 switch with ExtremeXOS 12.3.4, and the minimum ExtremeXOS version required, include:

Table 31: Summit X350 Switch XENPAK Support

XENPAK Module	ExtremeXOS Required
SR	12.0.3.16
LR	12.0.3.16
ER	12.0.3.16
LX4	12.0.3.16
ZR	12.0.3.16

XENPAKs not supplied by Extreme Networks will show up as "Unsupported Optic Module" in the `show port x:y` information detail and `show port x:y configuration` command output.

XFP Module Support

XFP modules supported on the BlackDiamond 8800 series of switches with ExtremeXOS 12.3.4, the minimum ExtremeXOS version required include:

Table 32: BlackDiamond 8800 Series of Switches XFP Support

XFP Module	ExtremeXOS Required
SR	11.6.1.9
LR	11.6.1.9
ER	12.0.2.25
DWDM	12.1.2.17
ZR	12.1.2.17

XFP modules supported on the BlackDiamond 20808 switch with ExtremeXOS 12.3.4, the minimum ExtremeXOS version required include:

Table 33: BlackDiamond 20808 Switch XFP Support

XFP Module	ExtremeXOS Required
SR	12.2
LR	12.2
ER	12.2
ZR	12.2

XFP modules supported on the Summit X450a and X450e series switch with ExtremeXOS 12.3.4, the minimum ExtremeXOS version required, and the manufacturers supported include:

Table 34: Summit X450a and X450e Series Switch XFP Support

XFP Module	ExtremeXOS Required
SR	11.5.1.4
LR	11.5.1.4
ER	12.0.2.25
DWDM	12.1.2.17
ZR	12.1.2.17

XFP modules supported on the Summit X350 switch with ExtremeXOS 12.3.4, the minimum ExtremeXOS version required, and the manufacturers supported include:

Table 35: Summit X350 Switch XFP Support

XFP Module	ExtremeXOS Required
SR	12.0.3.16
LR	12.0.3.16
ER	12.0.3.16
DWDM	12.1.2.17
ZR	12.1.2.17

Upgrading to ExtremeXOS

See "Software Upgrade and Boot Options" in the *ExtremeXOS 12.3 Concepts Guide* for instructions on upgrading ExtremeXOS software.

NOTE

For the BlackDiamond 8800 series of switches, a hitless upgrade to ExtremeXOS 12.3.4 from an earlier release is not supported and should not be attempted. Use the normal software upgrade process for these switches.

NOTE

Hitless upgrade from ExtremeXOS 12.0 and earlier to ExtremeXOS 12.1 and later is not supported on the BlackDiamond 12800 switch.

ExtremeXOS Command Line Support

The following is true for all Summit X150 and X350 series switches:

- Summit X150 and X350 series switches do not support L3 functionality; this platform does not support CLI commands for L3 functionality.
- Summit X150 and X350 series switches do not support stacking; all CLI commands for stacking are not supported on this platform.
- Summit X150 and X350 series switches do not support IP forwarding; however, CLI commands that configure IP addresses function in order to access the management functionality of the switch are supported.
- Upgrade or trial licensing is not available on the Summit X150 and X350 series switches.

Unsupported Commands on the Summit X150 and X350 Series Switches

Following is the list of processes that are not supported with an L2 Edge license.

- bgp
- msdp
- ospf
- ospfv3
- rip
- ripng
- pim
- vrrp
- brm
- upm

Table 36 lists the CLI commands not supported on the Summit X150 and X350 series switches.

Table 36: Summit X150 and X350 Unsupported Commands

Command	Description
configure	Configure running system information
ipforwarding	Configure IP forwarding behavior
ipmcforwarding	Configure IP multicast forwarding parameters
ipmroute	IP multicast routing module

Table 36: Summit X150 and X350 Unsupported Commands (Continued)

Command	Description
irdp	ICMP Router Discovery Protocol
stacking	Settings for stacking
vlan {vlan_name} router-discovery	IPv6 router discovery
vlan {vlan_name} udp-profile	UDP forwarding profile
disable	Disable running system setting
esrp	ESRP (Extreme Standby Router Protocol) Domain
ipforwarding	IP forwarding
ipmcforwarding	IP multicast forwarding help
irdp	ICMP Router Discovery Protocol
router-discovery	IPv6 router discovery
stacking	Stacking
enable	Enable running system setting
esrp <esrp-domain>	ESRP (Extreme Standby Router Protocol) Domain
ipforwarding	IP forwarding
ipmcforwarding	IP multicast forwarding help
irdp	ICMP Router Discovery Protocol
router-discovery	IPv6 router discovery
stacking	Stacking
reboot	Reboot system
node-address	Reboot a node in the stack
stack-topology	Reboot stack-topology
show	Show running system information
router-discovery	IPv6 router discovery
stacking	Stacking information
udp-profile	UDP forwarding profile
synchronize	Synchronize entire primary MSM to backup MSM
stacking	Synchronize stacking configuration
unconfigure	Unconfigure system configuration
stacking	Settings for stacking
vlan {vlan_name} router-discovery	IPv6 router discovery
vlan {vlan_name} udp-profile	UDP forwarding profile

Tested Third-Party Products

This section lists the third-party products tested for ExtremeXOS 12.3.4.

Tested RADIUS Servers

The following RADIUS servers are fully tested:

- Microsoft—Internet Authentication Server
- Funk Software—Steel-Belted RADIUS Enterprise Edition 4.5
- Meetinghouse
- FreeRADIUS

Tested Third-Party Clients

The following third-party clients are fully tested:

- Funk Odyssey 2.2
- MeetingHouse Data AEGIS 2.0.5
- Odyssey 3.03.0.1194

PoE Capable VoIP Phones

The following PoE capable VoIP phones are fully tested:

- Avaya 4620
- Avaya 4620SW IP telephone
- Avaya 9620
- Avaya 4602
- Avaya 9630
- Avaya 4621SW
- Avaya 4610
- Avaya 1616
- Avaya one-X
- Cisco 7970
- Cisco 7910
- Cisco 7960
- ShoreTel ShorePhone IP 212k
- ShoreTel ShorePhone IP 560
- ShoreTel ShorePhone IP 560g
- ShoreTel ShorePhone IP 8000
- ShoreTel ShorePhone IP BB 24
- Siemens OptiPoint 410 standard–2
- Siemens OpenStage 20

- Siemens OpenStage 40
- Siemens OpenStage 60
- Siemens OpenStage 80

Extreme Switch Security Assessment

DoS Attack Assessment

Tools used to assess DoS attack vulnerability:

- Network Mapper (NMAP)

ICMP Attack Assessment

Tools used to assess ICMP attack vulnerability:

- SSPing
- Twinge
- Nuke
- WinFreeze

Port Scan Assessment

Tools used to assess port scan assessment:

- Nessus

2 Limits

CHAPTER

This chapter summarizes the supported limits in ExtremeXOS 12.3.4.

This chapter contains the following sections:

- Multicast Scaling for BlackDiamond 20808 Switches Running ExtremeXOS 12.3.1 on page 35
- Supported Limits on page 36

Multicast Scaling for BlackDiamond 20808 Switches Running ExtremeXOS 12.3.1

Following are multicast scaling number recommendations for BlackDiamond 20808 systems running ExtremeXOS 12.3.1 software:

- It is recommended that you not exceed 3,700 (S, G) multicast streams in a BlackDiamond 20808 switch. If incoming streams are received via a load shared link, it is recommended that the scaling numbers be 2,000 entries and, along with the maximum number of link aggregation ports, not exceed four per group. This number will vary per link aggregation groups.
- It is recommended that you not exceed 3,770 egress interfaces (group subscribers) for all (S, G) entries for each of the following port pair combinations:
  - 1G module

    First pair: ports 1 through 10, 21 through 30

    Second pair: ports 11 through 20, 31 through 40
  - 10G module

    First pair: ports 1, 3

    Second pair: ports 5, 7

    Third pair: ports 6, 8

    Fourth pair: ports 2, 4

  That is, when a 1G module is used, make sure the total number of egress interfaces in the 1G module for all (S, G) entries does not exceed 3,776 for the port pair combination. When a 10G module is used, it is recommended that you make sure the total number of egress interfaces in the 10G module does not exceed 3,776 for all (S, G) entries.
- It is recommended that you not exceed 128 egress interfaces per port for both 1G and 10G modules.

Supported Limits

Table summarizes tested metrics for a variety of features, as measured in a per-system basis unless otherwise noted. These limits may change but represent the current status. The contents of this table supersede any values mentioned in the *ExtremeXOS Concepts Guide*.

NOTE

The term “BlackDiamond 8000 e-series modules” refers to all BlackDiamond 8500 e-series and 8800 e-series modules.

NOTE

The term “*BlackDiamond 8000 series modules”* refers to all BlackDiamond 8500, 8800, and 8900 series modules.

NOTE

The scaling and performance information shown in Table is provided for the purpose of assisting with network design. It is recommended that network architects and administrators design and manage networks with an appropriate level of network scaling “head room.” The scaling and performance figures provided have been verified using specific network topologies using limited switch configurations. There is no guarantee that the scaling and performance figures shown are applicable to all network topologies and switch configurations and are provided as a realistic estimation only. If you experience scaling and performance characteristics that you feel are sufficiently below what has been documented, contact Extreme Networks technical support for additional assistance.

NOTE

The route limits shown in Table for IPv4 and IPv6 routing protocols are software limits only. The actual hardware limits may be lower than the software limits, based on platform. The hardware limits for specific platforms are specified as "IPv4/IPv6 routes (LPM entries in hardware)" in the following table.

NOTE

On a BlackDiamond 8800 or a Summit X650, X450, or X250e switch, it is not advised to have greater than 25,000 total IP routes from all routing protocols. Adverse effects can occur with routing tables larger than this, especially when a single network event or CLI command affects a significant number of routes. For example, just after such a network event, the added system load will cause a “save configuration” command to time out.

Table 37: Supported Limits

Metric	Product	Limit
Access lists (masks)—maximum number of ACL masks per port.[a]	BlackDiamond 8800 original series	16
	Summit X450	16

Table 37: Supported Limits

Metric	Product	Limit
Access lists (policies)—suggested maximum number of lines in a single policy file.	All platforms	300,000

Table 37: Supported Limits

Metric	Product	Limit
Access lists (policies)—maximum number of rules in a single policy file.[b]	BlackDiamond 8000 series	
	Original series modules (per GigE port) (per 10 GigE port)	 128 1,016
	a-series modules	2,048
	c-series modules	4,096ingress, 512 egress
	e-series modules	1,024 ingress,
	BlackDiamond 8900 c-series modules	
	8900-10G24X-c module (group of 12 ports)	2,048 ingress, 512 egress
	8900-G96T-c module (per group of 48 ports)	8,192 ingress, 1,024 egress
	BlackDiamond 10808	30,000
	Summit X150 and X350 series	1,024
	Summit X250e	
	per port groups 1-24 and 25-48	1,024
	Summit X450	
	(per GigE port) (per 10 GigE port)	128 1,016
	Summit X450a	
	per port groups 1-24 and 25-48	2,048
	Summit X450e	
	per port groups 1-24 and 25-48	1,024
	Summit X650-24x (with VIM1-SummitStack)	
	per port groups 1-12 and 13-28	2,048 ingress, 512 egress
	Summit X650-24x (with VIM1-10G8X)	
	per port groups 1-12, 13-24 and 25-32	2,048 ingress, 512 egress
	Summit X650-24x (with VIM1-SummitStack 512)	
	per port groups 1-12, 13-24	2,048 ingress, 512 egress
	Summit X650-24t (with VIM1-SummitStack)	
	per port groups (1,3,...23,25,26,27,28) and (2,4...24)	2,048 ingress, 512 egress
	Summit X650-24t (with VIM1-10G8X)	
	per port groups (1,3,...23), (2,4...24) and 25-32	2,048 ingress, 512 egress
	Summit X650-24t (with VIM1-SummitStack 512)	
	per port groups 1-12, 13-24	2,048 ingress, 512 egress

Table 37: Supported Limits

Metric	Product	Limit
Access lists (slices)—number of ACL slices.	BlackDiamond 8000 series	
	a-series and c-series modules per port groups 1-12, 25-36 and 13-24, 37-48	16
	e-series modules per port groups 1-12, 25-36 and 13-24, 37-48	8
	BlackDiamond 8900 module	
	8900-10G24X-c module per group of 12 ports	12 ingress, 4 egress
	8900-G96T-c module per group of 48 ports	16 ingress, 4 egress
	Summit X150 and X350 series	
	Summit X250e	8
	per port groups 1-24 and 25-48	
	Summit X450a	8
	per port groups 1-24 and 25-48	
	Summit X450e	16
	per port groups 1-24 and 25-48	
	Summit X650-24x (with VIM1-SummitStack 512)	8
	per port groups 1-12 and 13-28	
	Summit X650-24x (with VIM1-10G8X)	12 ingress, 4 egress
	per port groups 1-12, 13-24 and 25-32	
	Summit X650-24t (with VIM1-SummitStack)	12 ingress, 4 egress
	per port groups (1,3,...23,25,26,27,28) and (2,4...24)	
	Summit X650-24t (with VIM1-10G8X)	12 ingress 4 egress
	per port groups (1,3,...23), (2,4...24) and 25-32	12 ingress, 4 egress
ACL static ingress L2 entries—maximum number of static ACL L2 entries.	BlackDiamond 20808	10,000
ACL static ingress L3 rules—maximum number of L3 ACL rules.	BlackDiamond 20808	20,000
ACL static egress L2 entries—maximum number of static ACL L2 entries.	BlackDiamond 20808	20,000
ACL static egress L3 rules—maximum number of L3 ACL rules.	BlackDiamond 20808	20,000
ACL dynamic L2 entries—maximum number of ACL L2 entries	BlackDiamond 20808	2,000
ACL dynamic L3 rules—maximum number of L3 ACL rules	BlackDiamond 20808	2,000
AAA (local)—maximum number of admin and local user accounts.	All platforms	16

Table 37: Supported Limits

Metric	Product	Limit
BGP (aggregates)—maximum number of BGP aggregates.	All platforms with Core license or higher	256
BGP (networks)—maximum number of BGP networks.	All platforms (except BlackDiamond 20808) with Core license or higher	1,024
	BlackDiamond 20808	2,048
BGP (peers)—maximum number of BGP peers.	BlackDiamond 8000 series modules	256*
	BlackDiamond 10808	
	MSM-1XL MSM-1	512 256
	BlackDiamond 12800 series	
	MSM-5 MSM-5R MSM-6R	256 256* 512
	BlackDiamond 20808	512
	Summit X450	128*
	Summit X450a	128*
	Summit X450e	128*
	Summit X650	128*
	* With default keepalive and hold timers.	
BGP (peer groups)—maximum number of BGP peer groups.	All platforms (except BlackDiamond 8900 series modules and BlackDIamond 20808) with Core license or higher	64
	BlackDIamond 8900 series modules	128
	BlackDiamond 20808	128
BGP (policy entries)—maximum number of BGP policy entries per route policy.	All platforms with Core license or higher	256
BGP (policy statements)—maximum number of BGP policy statements per route policy.	All platforms with Core license or higher	1,024
BGP (unicast address-family routes)—maximum number of unicast address-family routes (LPM entries is limited to support TCAM entries on a BlackDiamond 10808).	BlackDiamond 8000 series modules	25,000
	BlackDiamond 10808	
	MSM-1XL MSM-1	1,000,000 400,000
	BlackDiamond 12800 series	
	MSM-5 MSM-5R MSM-6R	400,000 400,000 1,000,000
	BlackDiamond 20808	512,000
	Summit X450	25,000
	Summit X450a	25,000
	Summit X450e	25,000
	Summit X650	25,000

Table 37: Supported Limits

Metric	Product	Limit
BGP (non-unique routes)—maximum number of non-unique BGP routes (LPM entries is limited to support TCAM entries on a BlackDiamond 10808).	BlackDiamond 8000 series modules	25,000
	BlackDiamond 10808	
	MSM-1XL	2,000,000
	MSM-1	900,000
	BlackDiamond 12800 series	
	MSM-5	900,000
	MSM-5R	900,000
	MSM-6R	2,000,000
	BlackDiamond 20808	2,000,000
	Summit X450	25,000
	Summit X450a	25,000
	Summit X450e	25,000
	Summit X650	25,000
BGP multicast address-family routes — maximum number of multicast address-family routes.	BlackDiamond 8000 series modules	25,000
	BlackDiamond 10808	
	MSM-1XL	1,000,000
	MSM-1	450,000
	BlackDiamond 12800 series	
	MSM-5	450,000
	MSM-5R	450,000
	MSM-6R	1,000,000
	BlackDiamond 20808	512,000
	Summit X450	25,000
	Summit X450a	25,000
	Summit X450e	25,000
	Summit X650	25,000
BOOTP/DHCP relay—maximum number of BOOTP or DHCP servers per virtual router.	All platforms	4
CLEAR-Flow—total number of rules supported. The ACL rules plus CLEAR-Flow rules must be less than the total number of supported ACLs. **Note:** CLEAR-Flow is not supported on "e" series switches and is only supported in a non-stack configuration in the Summit family of switches.	BlackDiamond 8800 c-series	4,096
	Summit X450a	2,048
	Summit X650	2,048
Connectivity Fault Management (CFM)—maximum number or CFM domains.	All platforms	8
CFM—maximum number of CFM associations.	All platforms	4,094
CFM—maximum number of CFM up end points.	BlackDiamond 8000 series modules	32
	BlackDiamond 10808	1,000
	BlackDiamond 12800 series	1,000
	BlackDiamond 20808	1,000
	Summit series	32

Table 37: Supported Limits

Metric	Product	Limit
CFM—maximum number of CFM down end points.	BlackDiamond 8000 series modules	32
	BlackDiamond 10808	1,000
	BlackDiamond 12800 series	1,000
	BlackDiamond 20808	1,000
	Summit series	32
CFM—maximum number of CFM remote end points per up/down end point.	All platforms	64
CFM—maximum number of dot1ag ports.	All platforms	128
CFM—maximum number of CFM segments.	All platforms	1,000
Dynamic ACLs—maximum number of ACLs processed per second. **Note**: Limits are load dependent.	BlackDiamond 8800 with c-series MSM and I/O modules	8
	BlackDiamond 12800 series	12
	Summit X450a	
	with 50 DACLs with 500 DACLs	10 5
	Summit X650	
	with 50 DACLs with 500 DACLs	10 5
EAPS domains—maximum number of EAPS domains. **Note**: An EAPS ring that is being spatially reused cannot have more than four configured EAPS domains.	BlackDiamond 8000 series modules	64
	BlackDiamond 10808	128
	BlackDiamond 12800 series	128
	BlackDIamond 20808	128
	Summit series	32
EAPSv1 protected VLANs—maximum number of protected VLANs.	BlackDiamond 8000 series modules	2,000
	BlackDiamond 10808	4,000
	BlackDiamond 12800 series	4,000
	BlackDiamond 20808	4,000
	Summit series	1,000
EAPSv2 protected VLANs—maximum number of protected VLANs.	BlackDiamond 8000 series modules	2,000
	BlackDiamond 10808	4,000
	BlackDiamond 12800 series	4,000
	BlackDIamond 20808	4,000
	Summit series	500
ELSM (vlan-ports)—maximum number of VLAN ports.	BlackDiamond 8000 series modules	5,000
	BlackDiamond 10808	5,000
	BlackDiamond 12800 series	5,000
	BlackDIamond 20808	5,000
ESRP groups—maximum number of ESRP groups.	All platforms	7

Table 37: Supported Limits

Metric	Product	Limit
ESRP domains—maximum number of ESRP domains.	BlackDiamond 8800 series	64
	BlackDiamond 8900 series modules	128
	BlackDiamond 10808	128
	BlackDiamond 12800 series	64
	BlackDIamond 20808	128
	Summit series	64
ESRP VLANs—maximum number of ESRP VLANs.	BlackDiamond 8800 series	1,000
	BlackDiamond 8900 series modules	2,048
	BlackDiamond 10808	3,000
	BlackDiamond 12800 series	3,000
	BlackDIamond 20808	3,000
	Summit series	1,000
ESRP (maximum ping tracks)—maximum number of IP route tracks per VLAN.	All platforms	8
ESRP (IP route tracks)—maximum IP route tracks per VLAN.	All platforms	8
ESRP (VLAN tracks)—maximum number of VLAN tracks per VLAN.	All platforms	1
Forwarding rate—maximum L2/L3 software forwarding rate.	BlackDiamond 8800 series	10,000 pps
	BlackDiamond 12800 series	16,000 pps
	Summit series	10,000 pps
FDB (blackhole entries)—maximum number of unicast blackhole FDB entries.	BlackDiamond 8800 original series	16,000
	BlackDiamond 8800 a-series	16,000
	BlackDiamond 8800 c-series	32,000
	BlackDiamond 8000 e-series	8,000
	BlackDiamond 8900 c-series	32,000
	BlackDiamond 20808	100,000
	Summit X150	8,000
	Summit X250e	8,000
	Summit X350	8,000
	Summit X450 original	16,000
	Summit X450a	16,000
	Summit X450e	8,000
	Summit X650	32,000
FDB (blackhole entries)—maximum number of multicast blackhole FDB entries.	BlackDiamond 8800 original series	256
	BlackDiamond 8000 series (except BlackDiamond 8800 original series)	1,024
	Summit X450 original	256
	Summit series (except Summit X450 original)	1,024
FDB (MAC learning rate)—maximum number of packets per second.	BlackDiamond 20808	200,000

Table 37: Supported Limits

Metric	Product	Limit
FDB (maximum L2/L3 entries)—maximum number of MAC addresses/IP host routes.	BlackDiamond 10808	224,000
	BlackDiamond 12800 series	49,000
	BlackDiamond 12800 R-series	224,000
FDB (maximum L2 entries)—maximum number of MAC addresses.	BlackDiamond 8800 original	16,384
	BlackDiamond 8800 a-series	16,384
	BlackDiamond 8800 c-series	32,768
	BlackDiamond 8000 e-series	8,192
	BlackDiamond 8800 (system)	128,000
	BlackDiamond 20808	400,000
	Summit X150 and X350 series	8,192
	Summit X250e	8,192
	Summit X450	16,384
	Summit X450a	16,384
	Summit X450e	8,192
	Summit X650	32,768
	SummitStack	128,000
FDB table size—maximum size of FDB tables for the BlackDiamond 8800 series switches and modules, and BlackDiamond 20808 modules.	BlackDiamond 8000	
	G48Te module	8,000
	G48Pe module	8,000
	G48Ta module	16,000
	G48Xa module	16,000
	10G4Ca module	16,000
	10G4Xa module	16,000
	All original BlackDiamond 8800 modules (G48T, G48P, G24X, 10G4X)	16,000
	G48Tc module	32,000
	G24Xc module	32,000
	G48Xc module	32,000
	10G1Xc module	32,000
	10G4Xc module	32,000
	G8Xc module	32,000
	10G8Xc module	32,000
	8500-G48T-e	8,000
	8500-G24X-e	8,000
	8900-10G24X-c module	32,000
	8900-G96T-c module	32,000
	BlackDiamond 20808	
	Basic I/O modules	512,000
	Advanced I/O modules	1,049,000
Hierarchical QoS—maximum number of ingress-only traffic queues per system. (For 20XTR, first 10 ports ranges from 1 to 10 are UNIT-I, second 10 ports ranges from 11 to 20 are UNIT-II, for 10 Gig slot each port is one UNIT.)	BlackDiamond 12800 R-series	20,000
Hierarchical QoS—maximum number of ingress traffic queues with egress shaping allowed per switch.	BlackDiamond 12800 R-series	20,000

Table 37: Supported Limits

Metric	Product	Limit
Hierarchical QoS—maximum number of egress-only traffic queues allowed per switch.	BlackDiamond 12800 R-series	4,076
Hierarchical QoS—maximum number of traffic queues attach per port.	BlackDiamond 12800 R-series	4,076
	BlackDiamond 20808	1,340/980
	(This is based on traffic queue mode [strict priority/ bandwidth]. This number will decrease the more egress ports are configured.)	
IGMP sender—maximum number of IGMP senders per switch (IP multicast compression disabled).	BlackDiamond 8800 original	1,024
	BlackDiamond 8800 c-series	2,048[c]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	
	8900-10G24X-c module 8900-G96T-c module	2,048[c] 4,096
	BlackDiamond 10808	15,000
	BlackDiamond 12800 series	15,000
	BlackDiamond 20808	3,700
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	1,024
	Summit X450a	1,024
	Summit X450e	500[d]
	Summit X650	2,048
IGMP sender—maximum number of IGMP senders per switch (IP multicast compression enabled).	BlackDiamond 8800 original	2,000[d]
	BlackDiamond 8800 a-series	2,000[d]
	BlackDiamond 8800 c-series	6,000[d]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	6,000[d]
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	2,000[d]
	Summit X450a	2,000[d]
	Summit X450e	500[d]
	Summit X650	6,000[d]

Table 37: Supported Limits

Metric	Product	Limit
IGMP snooping per VLAN filters—maximum number of VLANs supported in per-VLAN IGMP snooping mode.	BlackDiamond 8800 original	60
	BlackDiamond 8800 a-series	1,000
	BlackDiamond 8800 c-series	2,000
	BlackDiamond 8000 e-series	448
	Summit X150	448
	Summit X250e	448
	Summit X350	448
	Summit X450	60
	Summit X450a	1,000
	Summit X450e	448
	Summit X650	1,000
IGMPv1/v2 SSM-map entries—maximum number of IGMPv1/v2 SSM mapping entries.	All platforms	500
IGMPv1/v2 SSM-MAP entries—maximum number of sources per group in IGMPv1/v2 SSM mapping entries.	All platforms	50
IGMPv2 subscriber—maximum number of IGMPv2 subscribers per port.	BlackDiamond 8800 original	1,000
	BlackDiamond 8800 c-series	2,000
	BlackDiamond 10808	5,000
	BlackDiamond 12800 series	5,000
	BlackDIamond 20808	5,000
	Summit series except Summit X650	1,000
	Summit X650	2,000
IGMPv2 subscriber—maximum number of IGMPv2 subscribers per switch.	BlackDiamond 8800 original	10,000
	BlackDiamond 8800 c-series	20,000
	BlackDiamond 10808	30,000
	BlackDiamond 12800 series	30,000
	BlackDiamond 20808	30,000
	Summit series except Summit X650	10,000
	Summit X650	20,000
IGMPv3 maximum source per group—maximum number of source addresses per group.	All platforms	250
IGMPv3 subscriber—maximum number of IGMPv3 subscribers per port.	BlackDiamond 8800 original	1,000
	BlackDiamond 8800 c-series	2,000
	BlackDiamond 8900 series modules	5,000
	BlackDiamond 10808	5,000
	BlackDiamond 12800 series	5,000
	BlackDiamond 20808	5,000
	Summit series	1,000

Table 37: Supported Limits

Metric	Product	Limit
IGMPv3 subscriber—maximum number of IGMPv3 subscribers per switch.	BlackDiamond 8800 original	10,000
	BlackDiamond 8800 c-series	20,000
	BlackDiamond 8900 series modules	30,000
	BlackDiamond 10808	30,000
	BlackDiamond 12800 series	30,000
	BlackDiamond 20808	30,000
	Summit series	10,000
IP ARP entries in software—maximum number of IP ARP entries in software.	All platforms	20,480
IPv4 ARP entries in hardware with minimum LPM routes—maximum recommended number of IPv4 ARP entries in hardware, with minimum LPM routes present. For BlackDiamond 8800 and Summit series switches, assumes number of IP route reserved entries is 100 or less.	BlackDiamond 8800 original	2,000[d]
	BlackDiamond 8800 a-series	8,000
	BlackDiamond 8800 c-series	8,000
	BlackDiamond 8000 e-series	1,000[d]
	BlackDiamond 10808	224,000
	BlackDiamond 12800 series	49,000
	BlackDiamond 12800 R-series	224,000
	BlackDiamond 20808	20,000
	Summit X250e	1,000[d]
	Summit X450	2,000[d]
	Summit X450a	8,000
	Summit X450e	1,000[d]
	Summit X650	8,000
IPv4 ARP entries in hardware with maximum LPM routes—maximum recommended number of IPv4 ARP entries in hardware, with maximum LPM routes present. For BlackDiamond 8800 and Summit series, assumes number of IP route reserved entries is "maximum."	BlackDiamond 8800 original	2,000[d]
	BlackDiamond 8800 a-series	2,000[d]
	BlackDiamond 8800 c-series	6,000[d]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 10808	224,000
	BlackDiamond 12800 series	49,000
	BlackDiamond 12800 R-series	224,000
	Summit X250e	500[d]
	Summit X450	2,000[d]
	Summit X450a	2,000[d]
	Summit X450e	500[d]
	Summit X650	6,000[d]

Table 37: Supported Limits

Metric	Product	Limit
IPv4 remote hosts in hardware with zero LPM routes—maximum recommended number of IPv4 remote hosts (hosts reachable through a gateway) in hardware when LPM routing is not used. For BlackDiamond 8800 and Summit series, assumes number of IP route reserved entries is 0, and number of IPv4 ARP entries present is 100 or less.	BlackDiamond 8800 original	N/A
	BlackDiamond 8800 a-series	14,000[d]
	BlackDiamond 8800 c-series	18,000[d]
	BlackDiamond 8000 e-series	1,000[d]
	BlackDiamond 10808	N/A
	BlackDiamond 12800 series	N/A
	BlackDiamond 12800 R-series	N/A
	Summit X250e	1,000[d]
	Summit X450	N/A
	Summit X450a	14,000[d]
	Summit X450e	1,000[d]
	Summit X650	18,000[d]
IPv6 host entries in hardware—maximum number of IPv6 neighbor entries in hardware.	BlackDiamond 8800 a-series	1,000[d]
	BlackDiamond 8800 c-series	3,000[d]
	BlackDiamond 8000 e-series	250[d]
	BlackDiamond 10808	112,000
	BlackDiamond 12800 series	24,500
	BlackDiamond 12800 R-series	112,000
	Summit X250e	250[d]
	Summit X450a	1,000[d]
	Summit X450e	250[d]
	Summit X650	2,000[d]
IPv4 routes—maximum number of IPv4 routes in software (combination of unicast and multicast routes).	BlackDiamond 8800 series	25,000
	BlackDiamond 10808	1,000,000
	BlackDiamond 12800 series	1,000,000
	BlackDiamond 20808	1,000,000
	Summit series	25,000

Table 37: Supported Limits

Metric	Product	Limit
IPv4 routes (LPM entries in hardware)—number of IPv4 routes in hardware.	BlackDiamond 8800 original	8,000
	BlackDiamond 8800 a-series	12,000
	BlackDiamond 8800 c-series	12,000
	BlackDiamond 8000 e-series	480
	BlackDiamond 10808	256,000
	MSM-1 MSM-1XL	98,000 229,000
	BlackDiamond 12800 series	
	MSM-5 MSM-5R MSM-6R	49,000 229,000 229,000
	BlackDiamond 20808	512,000
	Summit X250e	480
	Summit X450	8,000
	Summit X450a	12,000
	Summit X450e	480
	Summit X650	12,000
IPv6 routes (LPM entries in hardware)—number of IPv6 routes in hardware.	BlackDiamond 8800 a-series	6,000
	BlackDiamond 8800 c-series	6,000
	BlackDiamond 8000 e-series	240
	BlackDiamond 10808	114,500
	BlackDiamond 12800 series	114,500
	Summit X250e	240
	Summit X450a	6,000
	Summit X450e	240
	Summit X650	6,000
IP router interfaces—maximum number of VLANs performing IP routing–excludes sub VLANs (IPv4 and IPv6 interfaces).	All platforms with Edge license or higher	512
IP multicast static routes—maximum number of permanent multicast IP routes.	All platforms	1,024
IP unicast static routes—maximum number of permanent IP unicast routes.	All platforms	1,024
IP route sharing (maximum gateways)—configurable maximum number of configurable gateways used by equal cost multipath OSPF, OSPFv3, or static routes.	BlackDiamond 8800 series	2, 4, or 8
	Summit X250e	2, 4, or 8
	Summit X450	2, 4, or 8
	Summit X450a	2, 4, or 8
	Summit X450e	2, 4, or 8
	Summit X650	2, 4, or 8

Table 37: Supported Limits

Metric	Product	Limit
IP route sharing (total destinations)—maximum number of unique destinations used by multipath OSPF, OSPFv3, or static routes.	BlackDiamond 8800 original	
	(default maximum gateways of 4)	511
	(if maximum gateways is 2)	1,023
	(if maximum gateways is 8)	255
	BlackDiamond 8800 a-series	
	(default maximum gateways of 4)	511
	(if maximum gateways is 2)	1,023
	(if maximum gateways is 8)	255
	BlackDiamond 8800 c-series	
	(default maximum gateways of 4)	511
	(if maximum gateways is 2)	1,023
	(if maximum gateways is 8)	255
	BlackDiamond 8000 e-series	
	(default maximum gateways of 4)	31
	(if maximum gateways is 2)	63
	(if maximum gateways is 8)	15
	BlackDiamond 10808	
	(with up to 8 gateways per destination)	7,136
	BlackDiamond 12800 series	
	(with up to 8 gateways per destination)	7,136
	Summit X250e	
	(default maximum gateways of 4)	31
	(if maximum gateways is 2)	63
	(if maximum gateways is 8)	15
	Summit X450	
	(default maximum gateways of 4)	511
	(if maximum gateways is 2)	1,023
	(if maximum gateways is 8)	255
	Summit X450a	
	(default maximum gateways of 4)	511
	(if maximum gateways is 2)	1,023
	(if maximum gateways is 8)	255
	Summit X450e	
	(default maximum gateways of 4)	31
	(if maximum gateways is 2)	63
	(if maximum gateways is 8)	15
	Summit X650	
	(default maximum gateways of 4)	511
	(if maximum gateways is 2)	1,023
	(if maximum gateways is 8)	255
IP multinetting (secondary IP addresses)—maximum number of secondary IP addresses per VLAN.	All platforms	64

Table 37: Supported Limits

Metric	Product	Limit
IS-IS adjacencies—maximum number of supported IS-IS adjacencies.	BlackDiamond 8000 series modules	128
	Black Diamond 10808	255
	BlackDiamond 12800 series	255
	BlackDiamond 20808	255
	Summit X450	128
	Summit X450a	128
	Summit X650	128
IS-IS ECMP—maximum number of equal cost multipath for IS-IS.	BlackDiamond 8000 series modules	8
	BlackDiamond 10808	8
	BlackDiamond 12800 series	8
	BlackDiamond 20808	8
	Summit X450 (configurable)	2, 4, or 8
	Summit X450a (configurable)	2, 4, or 8
	Summit X650 (configurable)	2, 4, or 8
IS-IS interfaces—maximum number of interfaces that can support IS-IS.	All platforms	255
IS-IS routers in an area—recommended maximum number of IS-IS routers in an area.	All platforms	256
IS-IS route origination—recommended maximum number of routes that can be originated by an IS-IS node.	BlackDiamond 8000 series modules	20,000
	BlackDiamond 10808	30,000
	BlackDiamond 12800 series	30,000
	BlackDiamond 20808	30,000
	Summit X450	5,000
	Summit X450a	5,000
	Summit X650	20,000
IS-IS IPv4 L1 routes in an L1 router—recommended maximum number of IS-IS Level 1 routes in a Level 1 IS-IS router.	BlackDiamond 8000 series modules	25,000
	BlackDiamond 10808	
	MSM-1	120,000
	MSM-1XL	180,000
	BlackDiamond 12800 series	
	MSM-5	100,000
	MSM-5R	120,000
	MSM-6R	180,000
	BlackDiamond 20808	120,000
	Summit X450	5,000
	Summit X450a	5,000
	Summit X650	25,000

Table 37: Supported Limits

Metric	Product	Limit
IS-IS IPv4 L2 routes—recommended maximum number of IS-IS Level 2 routes.	BlackDiamond 8000 series modules	25,000
	BlackDiamond 10808	
	MSM-1	120,000
	MSM-1XL	180,000
	BlackDiamond 12800 series	
	MSM-5	100,000
	MSM-5R	120,000
	MSM-6R	180,000
	BlackDiamond 20808	120,000
	Summit X450	5,000
	Summit X450a	5,000
	Summit X650	25,000
IS-IS IPv4 L1 routes in an L1/L2 router—recommended maximum number of IS-IS Level 1 routes in an L1/L2 IS-IS router.	BlackDiamond 8000 series modules	20,000
	BlackDiamond 10808	
	MSM-1	20,000
	MSM-1XL	25,000
	BlackDiamond 12800 series	
	MSM-5	20,000
	MSM-5R	20,000
	MSM-6R	25,000
	BlackDiamond 20808	20,000
	Summit X450	3,000
	Summit X450a	3,000
	Summit X650	20,000
IS-IS IPv6 L1 routes in an L1 router—recommended maximum number of IS-IS Level 1 routes in a Level 1 IS-IS router.	BlackDiamond 8000 series modules	10,000
	BlackDiamond 10808	
	MSM-1	30,000
	MSM-1XL	65,000
	BlackDiamond 12800 series	
	MSM-5	30,000
	MSM-5R	40,000
	MSM-6R	65,000
	Summit X450	5,000
	Summit X450a	5,000
	Summit X650	10,000

Table 37: Supported Limits

Metric	Product	Limit
IS-IS IPv6 L2 routes—recommended maximum number of IS-IS Level 2 routes.	BlackDiamond 8000 series modules	10,000
	BlackDiamond 10808	
	MSM-1	30,000
	MSM-1XL	65,000
	BlackDiamond 12800 series	
	MSM-5	30,000
	MSM-5R	40,000
	MSM-6R	65,000
	BlackDiamond 20808	40,000
	Summit X450	5,000
	Summit X450a	5,000
	Summit X650	10,000
IS-IS IPv6 L1 routes in a L1/L2 router—recommended maximum number of IS-IS Level 1 routes in a L1/l2 router.	BlackDiamond 8000 series modules	10,000
	BlackDiamond 10808	
	MSM-1	15,000
	MSM-1XL	25,000
	BlackDiamond 12800 series	
	MSM-5	15,000
	MSM-5R	15,000
	MSM-6R	25,000
	BlackDiamond 20808	15,000
	Summit X450	3,000
	Summit X450a	3,000
	Summit X650	10,000
IS-IS IPv4/IPv6 L1 routes in an L1 router—recommended maximum number of IS-IS Level 1 routes in a Level 1 IS-IS router. The numbers documented are based on 50% IPv4 routes and 50% IPv6 routes.	BlackDiamond 8000 series modules	20,000
	BlackDiamond 10808	
	MSM-1	60,000
	MSM-1XL	130,000
	BlackDiamond 12800 series	
	MSM-5	30,000
	MSM-5R	60,000
	MSM-6R	130,000
	BlackDiamond 20808	60,000
	Summit X450	5,000
	Summit X450a	5,000
	Summit X650	20,000

Table 37: Supported Limits

Metric	Product	Limit
IS-IS IPv4/IPv6 L2 routes in an L2 router—recommended maximum number of IS-IS Level 2 routes in a Level 2 IS-IS router. The numbers documented are based on 50% IPv4 routes and 50% IPv6 routes.	BlackDiamond 8000 series modules	20,000
	BlackDiamond 10808	
	MSM-1	60,000
	MSM-1XL	130,000
	BlackDiamond 12800 series	
	MSM-5	30,000
	MSM-5R	60,000
	MSM-6R	130,000
	BlackDiamond 20808	60,000
	Summit X450	5,000
	Summit X450a	5,000
	Summit X650	20,000
IS-IS IPv4/IPv6 L1 routes in a L1/L2 router—recommended maximum number of IS-IS Level 1 routes in a Level 1/Level2 IS-IS router. The numbers documented are based on 50% IPv4 routes and 50% IPv6 routes.	BlackDiamond 8000 series modules	20,000
	BlackDiamond 10808	20,000
	BlackDiamond 12800 series	20,000
	BlackDiamond 20808	20,000
	Summit X450	3,000
	Summit X450a	3,000
	Summit X650	20,000
Jumbo frames—maximum size supported for jumbo frames, including the CRC.	All platforms	9,216
Load-sharing groups—maximum number of load share groups. **Note:** The actual number of load share groups that can be configured is limited by the number of physical ports present in the switch or SummitStack.	BlackDiamond 8000 series	
	with 10G4X	32
	without 10G4X	128
	BlackDiamond 10808	128
	BlackDiamond 12800 series	128
	BlackDiamond 20808	128
	Summit X150 and X350 series	128
	Summit X250e	128
	Summit X450	32
	Summit X450a	128
	Summit X450e	128
	Summit X650	128
	SummitStack	
	with Summit X450-24t	32
	with Summit X450-24x	32
	without Summit X450-24t	128
	without Summit X450-24x	128

Table 37: Supported Limits

Metric	Product	Limit
Load sharing—maximum number of ports per load-share group.	BlackDiamond 8000 series	8
	BlackDiamond 10808	16
	BlackDiamond 12800 series	16
	BlackDiamond 20808	16
	Summit series	8
Logged messages—maximum number of messages logged locally on the system.	All platforms	20,000
MAC-based security—maximum number of MAC-based security policies.	All platforms	1,024
MAC-in-MAC—maximum number of MAC FDB entries (MAC addresses on the local side) and MAC binding entries (MAC addresses on remote side).	BlackDiamond 10808	100,000
	BlackDiamond 12800 series	100,000
MAC-in-MAC—maximum number of regular VLANs (VLAN, vMAN, BVLAN).	BlackDiamond 10808	4,000
	BlackDiamond 12800 series	4,000
MAC-in-MAC—maximum number of SVLANs.	BlackDiamond 10808 (1G DRAM)	2,000
	BlackDiamond 12800 series (512 DRAM)	2,000
Mirroring (filters)—maximum number of mirroring filters.	All platforms	16
Mirroring (monitor port)—maximum number of monitor ports.	All platforms	1
Mirroring, one-to-many (filters)—maximum number of one-to-many mirroring filters.	All platforms	16
Mirroring, one-to-many (monitor port)—maximum number of one-to-many monitor ports.	All platforms	16
MPLS LDP enabled interfaces—maximum number of MPLS LDP configured interfaces per switch.	BlackDiamond 10808	32
	BlackDiamond 12800 R-series	32
	BlackDiamond 20808	50
MPLS LDP peers—maximum number of MPLS LDP peers per switch.	BlackDiamond 10808	32
	BlackDiamond 12800 R-series	32
	BlackDiamond 20808	64
MPLS LDP adjacencies—maximum number of MPLS LDP adjacencies per switch.	All platforms	64
MPLS LDP ingress LSPs—maximum number of MPLS ingress LSPs per switch. * **Note:** The maximum number of ingress LSPs is reduced by one for each transit LSP, that is, If 8,000 transit LSPs are in use, the maximum number of ingress LSPs is 8,000.	BlackDiamond 10808	40,000
	BlackDiamond 12800 R-series	30,000
	BlackDiamond 20808	16,000*

Table 37: Supported Limits

Metric	Product	Limit
MPLS LDP transit LSPs—maximum number of MPLS transit LSPs per switch.	BlackDiamond 10808	40,000
	BlackDiamond 12800 R-series	30,000
	BlackDiamond 20808	16,000
MPLS LDP egress LSPs—maximum number of MPLS egress LSPs per switch.	BlackDiamond 10808	40,000
	BlackDiamond 12800 R-series	30,000
	BlackDiamond 20808	16,000
MPLS static LSPs—maximum number of static LSPs.	BlackDiamond 10808	1,000
	BlackDiamond 12800 R-series	1,000
	BlackDiamond 20808	100
MSDP active peers—maximum number of active MSDP peers.	BlackDiamond 8800 series	32
	BlackDiamond 8900 series modules	64
	BlackDiamond 10808	32
	BlackDiamond 12800 series	32
	BlackDiamond 20808	64
	Summit X450	16
	Summit X650	16
MSDP SA cache entries—maximum number of entries in SA cache.	BlackDiamond 8800 series	16,000
	BlackDiamond 8900 series modules	16,000
	BlackDiamond 10808	16,000
	BlackDiamond 12800 series	16,000
	BlackDiamond 20808	15,000
	Summit X450	8,000
	Summit X650	8,000
MSDP maximum mesh groups—maximum number of MSDP mesh groups.	BlackDiamond 8800 series	8
	BlackDiamond 8900 series modules	16
	BlackDiamond 10808	8
	BlackDiamond 12800 series	8
	BlackDiamond 20808	16
	Summit X450	4
	Summit X650	4

Table 37: Supported Limits

Metric	Product	Limit
Multicast VLAN registration (L)—maximum number of MVR senders per switch (IP multicast compression disabled).	BlackDiamond 8800 original	1,024
	BlackDiamond 8800 c-series	2,048[c]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	
	8900-10G24X-c module 8900-G96T-c module	2,048[c] 4,096
	BlackDiamond 10808	15,000
	BlackDiamond 12800 series	15,000
	BlackDiamond 20808	3,700
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	1,024
	Summit X450a	1,024
	Summit X450e	500[d]
	Summit X650	2,048
Multicast VLAN registration (MVR)—maximum number of MVR senders per switch (IP multicast compression enabled).	BlackDiamond 8800 original	2,000[d]
	BlackDiamond 8800 a-series	2,000[d]
	BlackDiamond 8800 c-series	6,000[d]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	6,000[d]
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	2,000[d]
	Summit X450a	2,000[d]
	Summit X450e	500[d]
	Summit X650	6,000[d]
Network Login—maximum number of clients being authenticated on MAC-based VLAN enabled ports.	BlackDiamond 8000 series modules (clients per module/per system)	1,024
	BlackDiamond 12804 (per system)	4,000
	Summit X150	1,024
	Summit X250e (per system)	1,024
	Summit X350	1,024
	Summit X450 (per system)	1,024
	Summit X650 (per system)	1,024
Network Login—maximum number of dynamic VLANs.	All platforms (except the BlackDiamond 20808)	2,000

Table 37: Supported Limits

Metric	Product	Limit
OSPF adjacencies—maximum number of supported OSPF adjacencies.	BlackDiamond 8000 series modules	128
	BlackDiamond 10808	255
	BlackDiamond 12800 series	255
	BlackDiamond 20808	255
	Summit X250e	128
	Summit X450	128
	Summit X650	128
OSPF areas—as an ABR, how many OSPF areas are supported within the same switch.	All platforms	8
OSPF ECMP—maximum number of equal cost multipath OSPF.	BlackDiamond 8000 series modules	8
	BlackDiamond 10808	8
	BlackDiamond 12800 series	8
	BlackDiamond 20808	8
	Summit X250e (configurable)	2, 4, or 8
	Summit X450 (configurable)	2, 4, or 8
	Summit X650 (configurable)	2, 4, or 8
OSPF external routes—recommended maximum number of external routes contained in an OSPF LSDB without too many other types of OSPF routes.	BlackDiamond 8000 series modules	20,000
	BlackDiamond 10808	130,000
	BlackDiamond 12800 series	130,000
	BlackDiamond 20808	130,000
	Summit X250e	5,000
	Summit X450	5,000
	Summit X650	5,000
OSPF inter- or intra-area routes—recommended maximum number of inter- or intra-area routes contained in an OSPF LSDB without too many other types of OSPF routes, with one ABR in OSPF domain.	BlackDiamond 8000 series modules	7,000
	BlackDiamond 10808	7,000
	BlackDiamond 12800 series	7,000
	BlackDiamond 20808	7,000
	Summit X250e	2,000
	Summit X450	2,000
	Summit X650	2,000
OSPF routers in a single area—recommended maximum number of routers in a single OSPF area.	BlackDiamond 8000 series modules	100
	BlackDiamond 10808	200
	BlackDiamond 12800 series	100
	BlackDiamond 20808	200
	Summit X250e	50
	Summit X450	50
	Summit X650	50
OSPF subnets on a single router—recommended maximum number of OSPF routed subnets on a switch.	All platforms with Core license or higher	400

Table 37: Supported Limits

Metric	Product	Limit
OSPF virtual links—maximum number of supported OSPF virtual links.	All platforms with Core license or higher	32
OSPFv2 links—maximum number of links in the router LSA.	All platforms	419
OSPFv3 areas—as an ABR, the maximum number of supported OSPFv3 areas.	All platforms with Core license or higher	16
OSPFv3 interfaces—maximum number of OSPFv3 interfaces.	BlackDiamond 8000 series modules	256
	BlackDiamond 10808	384
	BlackDiamond 12800 series	256
	BlackDiamond 20808	384
	Summit X450	128
	Summit X450a	128
	Summit X650	128
OSPFv3 active interfaces—maximum number of OSPFv3 active interfaces.	All platforms with Advanced Edge license	4
OSPFv3 neighbors—maximum number of OSPFv3 neighbors.	BlackDiamond 8000 series modules	64
	BlackDiamond 10808	128
	BlackDiamond 12800 series	128
	BlackDiamond 20808	128
	Summit X450	64
	Summit X450a	64
	Summit X650	64
OSPFv3 virtual links—maximum number of OSPFv3 virtual links supported.	All platforms with Core license or higher	16
OSPFv3 external routes—recommended maximum number of external routes.	BlackDiamond 8000 series modules	10,000
	BlackDiamond 10808	60,000
	BlackDiamond 12800 series	50,000
	BlackDiamond 20808	60,000
	Summit X450	10,000
	Summit X450a	10,000
	Summit X650	10,000
OSPFv3 inter- or intra-area routes—recommended maximum number of inter- or intra-area routes.	BlackDiamond 8000 series modules	6,000
	BlackDiamond 10808	6,000
	BlackDiamond 12800 series	6,000
	BlackDiamond 20808	6,000
	Summit X450	3,000
	Summit X450a	3,000
	Summit X650	3,000

Table 37: Supported Limits

Metric	Product	Limit
PIM snooping—maximum number of (S,G) entries programmed in the hardware (IP multicast compression disabled).	BlackDiamond 8800 original	1,024
	BlackDiamond 8800 c-series	2,048[c]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	
	8900-10G24X-c module 8900-G96T-c module	2,048[c] 4,096
	BlackDiamond 10808	15,000
	BlackDiamond 12800 series	15,000
	BlackDiamond 20808	3,700
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	1,024
	Summit X450a	1,024
	Summit X450e	500[d]
	Summit X650	2,048
PIM snooping—maximum number of (S,G) entries programmed in the hardware (IP multicast compression enabled).	BlackDiamond 8800 original	2,000[d]
	BlackDiamond 8800 a-series	2,000[d]
	BlackDiamond 8800 c-series	6,000[d]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	6,000[d]
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	2,000[d]
	Summit X450a	2,000[d]
	Summit X450e	500[d]
	Summit X650	6,000[d]

Table 37: Supported Limits

Metric	Product	Limit
PIM—maximum routes—maximum number of (S,G) entries installed in the hardware (IP multicast compression disabled).	BlackDiamond 8800 original	1,024
	BlackDiamond 8800 c-series	2,048[c]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	
	8900-10G24X-c module 8900-G96T-c module	2,048[c] 4,096
	BlackDiamond 10808	12,000
	BlackDiamond 12800 series	12,000
	BlackDiamond 20808	3,700
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	1,024
	Summit X450a	1,024
	Summit X450e	500[d]
	Summit X650	2,048
PIM—maximum routes—maximum number of (S,G) entries installed in the hardware (IP multicast compression enabled).	BlackDiamond 8800 original	2,000[d]
	BlackDiamond 8800 a-series	2,000[d]
	BlackDiamond 8800 c-series	6,000[d]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	6,000[d]
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	1,024
	Summit X450a	1,024
	Summit X450e	500[d]
	Summit X650	2,048

Table 37: Supported Limits

Metric	Product	Limit
PIM-SSM (maximum SSM routes)—maximum number of (S,G) entries installed in the hardware with PIM SSM configuration (IP multicast compression disabled).	BlackDiamond 8800 original	1,024
	BlackDiamond 8800 c-series	2,048[c]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	
	8900-10G24X-c module 8900-G96T-c module	2,048[c] 4,096
	BlackDiamond 10808	15,000
	BlackDiamond 12800 series	15,000
	BlackDiamond 20808	3,700
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	1,024
	Summit X450a	1,024
	Summit X450e	500[d]
	Summit X650	2,048
PIM-SSM (maximum SSM routes)—maximum number of (S,G) entries installed in the hardware with PIM SSM configuration (IP multicast compression enabled).	BlackDiamond 8800 original	2,000[d]
	BlackDiamond 8800 a-series	2,000[d]
	BlackDiamond 8800 c-series	6,000[d]
	BlackDiamond 8000 e-series	500[d]
	BlackDiamond 8900 series modules	6,000[d]
	Summit X150	500[d]
	Summit X250e	500[d]
	Summit X350	500[d]
	Summit X450	2,000[d]
	Summit X450a	2,000[d]
	Summit X450e	500[d]
	Summit X650	6,000[d]
PIM (maximum interfaces)—maximum number of PIM active interfaces.	All platforms	256
PIM (maximum interfaces)—maximum number of PIM snooping enabled interfaces.	All platforms	256
Policy-based routing (PBR) redundancy—maximum number of flow-redirect and nexthops per each flow-direct.	All platforms	32

Table 37: Supported Limits

Metric	Product	Limit
Private VLANs—maximum number of subscribers. Assumes a minimum of one port per network and subscriber VLAN.	BlackDiamond 8800 a-, c-, and e-series	
	with eight modules of 48 ports	383
	BlackDiamond 10808	1,400
	BlackDiamond 12800 series	1,400
	BlackDiamond 20808	700
	Summit X450a and X450e, 24 port	
	with two-port option card without option card	25 23
	Summit X450a and X450e, 48 port	
	with two-port option card without option card	49 47
	Summit X650	23
Private VLANs—maximum number of private VLANs with an IP address on the network VLAN.	All platforms	512
Private VLANs—maximum number of private VLANs in an L2-only environment.	All platforms	2,046
Provider Backbone Bridging-Traffic Engineering (PBB-TE)—maximum number of static MAC binding entries.	BlackDiamond 10808	
	MSM-1 MSM-1XL	98,000 100,000
	BlackDiamond 12800 series	
	MSM-5 MSM-5R MSM-6R	49,000 100,000 100,000
Route policies—suggested maximum number of lines in a route policy file.	All platforms	10,000
RIP-learned routes—maximum number of RIP routes supported without aggregation.	BlackDiamond 8000 series modules	10,000
	BlackDiamond 10808	10,000
	BlackDiamond 20808	10,000
	Summit X250e	3,000
	Summit X450	3,000
	Summit X650	10,000
RIP interfaces on a single routes—recommended maximum number of RIP routed interfaces on a switch.	BlackDiamond 8000 series modules	256
	BlackDiamond 10808	384
	BlackDiamond 20808	384
	Summit X250e	128
	Summit X450	128
	Summit X650	256

Table 37: Supported Limits

Metric	Product	Limit
RIPng learned routes—maximum number of RIPng routes.	BlackDiamond 8000 series modules	3,000
	BlackDiamond 10808	5,000
	BlackDiamond 12800 series	5,000
	BlackDiamond 20808	5,000
	Summit X250e	1,500
	Summit X450	1,500
	Summit X650	3,000
RSVP-TE interfaces—maximum number of interfaces.	BlackDiamond 10808	32
	BlackDiamond 12800 R-series	32
	BlackDiamond 20808	64
RSVP-TE ingress LSPs—maximum number of ingress LSPs.	BlackDiamond 10808	2,000
	BlackDiamond 12800 R-series	2,000
	BlackDiamond 20808	2,000
RSVP-TE egress LSPs—maximum number of egress LSPs.	BlackDiamond 10808	4,000
	BlackDiamond 12800 R-series	3,000
	BlackDiamond 20808	2,000
RSVP-TE transit LSPs—maximum number of transit LSPs.	BlackDiamond 10808	2,000
	BlackDiamond 12800 R-series	1,500
	BlackDiamond 20808	2,000
RSVP-TE paths—maximum number of paths.	BlackDiamond 10808	1,000
	BlackDiamond 12800 R-series	1,000
	BlackDiamond 20808	1,000
RSVP-TE profiles—maximum number of profiles.	BlackDiamond 10808	1,000
	BlackDiamond 12800 R-series	1,000
	BlackDiamond 20808	1,000
RSVP-TE EROs—maximum number of EROs per path.	BlackDiamond 10808	64
	BlackDiamond 12800 R-series	64
	BlackDiamond 20808	64
Spanning Tree (maximum STPDs)—maximum number of Spanning Tree Domains on port mode EMISTP.	All platforms	64
Spanning Tree PVST—maximum number of port mode PVST domains.	All platforms (except BlackDiamond 20808)	128
	BlackDiamond 20808	256
Spanning Tree—maximum number of multiple spanning tree instances (MSTI) domains.	All platforms	64
Spanning Tree—maximum number of VLANs per MSTI.	All platforms	500
Spanning Tree—maximum number of VLANs on all MSTP instances.	All platforms (except BlackDiamond 20808)	1,000
	BlackDiamond 20808	1,024
Spanning Tree (802.1d domains)—maximum number of 802.1d domains per port.	All platforms	1

Table 37: Supported Limits

Metric	Product	Limit
Spanning Tree (number of ports)—maximum number of ports including all Spanning Tree domains.	All platforms	2,048
Spanning Tree (maximum VLANs)—maximum number of STP protected VLANs.	BlackDiamond 8900 series modules (dot1d and dot1w)	1,024
	BlackDiamond 20808 (dot1d and dot1w)	1,024
	All other platforms (dot1d)	560
	All other platforms (dot1w)	560
SSH (number of sessions)—maximum number of simultaneous SSH sessions.	All platforms	8
Static MAC multicast FDB entries—maximum number of permanent multicast MAC entries configured into the FDB.	BlackDiamond 8800 original series	256
	BlackDiamond 8800 c-series	1,024
	BlackDiamond 8800 a-series	1,024
	BlackDiamond 8000 e-series	1,024
	BlackDiamond 10808	1,024
	BlackDiamond 12800 series	1,024
	Summit X150	1,024
	Summit X350 series	1,024
	Summit X250e	1,024
	Summit X450 original series	256
	Summit X450e	1,024
	Summit X450a	1,024
	Summit X650	1,024
Syslog servers—maximum number of simultaneous syslog servers that are supported.	All platforms	4
TCAM entries—amount of entries available in the lookup tables for Longest Prefix Match routing lookups, learned MAC address, and ACLs.	BlackDiamond 10808, MSM-1	128,000
	BlackDiamond 10808, MSM-1XL	256,000
	BlackDiamond 12800 series	49,000
	BlackDiamond 12800 R-series	229,000
	BlackDiamond 20808	128,000
Telnet (number of sessions)—maximum number of simultaneous Telnet sessions.	All platforms	8
Virtual routers—number of user virtual routers that can be created on a switch.	BlackDiamond 8800 c-series	8
	BlackDiamond 10808	8
	BlackDiamond 12800 series	8
	BlackDiamond 20808	8
	Summit X650	8
VLAN aggregation—maximum number of port-VLAN combinations on any one super VLAN and all of its sub VLANs.	All platforms	1,000
VLANs—includes all VLANs.	All platforms	4,094

Table 37: Supported Limits

Metric	Product	Limit
VLANs—maximum number of virtual ports.	BlackDiamond 12804	50,029
	BlackDiamond 20808	50,029
VLANs (Layer 2)—maximum number of Layer 2 VLANs.	All platforms	4,094
VLANs (Layer 3)—maximum number of Layer 3 VLANs.	All platforms	512
VLANs (maximum active port-based)—number of simultaneously active port-based VLANs.	All platforms	4,094
VLANs (maximum active protocol-sensitive filters)—number of simultaneously active protocol filters in the switch.	All platforms	15
VLAN translation—maximum number of translation VLANs. Assumes a minimum of one port per translation and member VLAN.	BlackDiamond 8800 a-, c-, and e-series	
	with eight modules of 48 ports	383
	BlackDiamond 10808	1,400
	BlackDiamond 12800 series	1,400
	Summit X450a and X450e, 24 port	
	with two-port option card without option card	25 23
	Summit X450a and X450e, 48 port	
	with two-port option card without option card	49 47
	Summit X650	23
VLAN translation—maximum number of translation VLAN pairs with an IP address on the translation VLAN.	All platforms	512
VLAN translation—maximum number of translation VLAN pairs in an L2 only environment.	All platforms	2,046
vMAN (maximum ACL rules for vMAN)—maximum number of ACL rules for vMAN.	BlackDiamond 10808	4,000
	BlackDiamond 12800 series	4,000
vMAN (0x8100 ethertype vMANs)—maximum number of vMANs configured on a port whose ethertype is 0x8100.	BlackDiamond 20808	
	per GigE port per 10 GigE port	20 200
VPLS: VCCV (pseudo wire Virtual Circuit Connectivity Verification) VPNs—maximum number of VCCV enabled VPLS VPNs.	BlackDiamond 10808	16
	BlackDiamond 12800 R-series	16
	BlackDiamond 20808	16
VPLS: MAC addresses in an H-VPLS network—maximum number of MAC address learned by a switch in an evenly distributed hierarchical VPLS **Note:** Increasing the number of spokes per VPLS will decrease the maximum number of MAC addresses that can be learned.	BlackDiamond 10808	60,000
	BlackDiamond 12800 R-series	60,000

Table 37: Supported Limits

Metric	Product	Limit
VPLS: MAC addresses in a fully meshed VPLS network—maximum number of MAC addresses learned by a switch in an evenly distributed fully meshed VPLS network.	BlackDiamond 10808 BlackDiamond 12800 R-series BlackDiamond 20808	100,000 80,000 100,000
VPLS: MAC addresses—maximum number of MAC addresses learned by a switch.	BlackDiamond 20808	100,000
VPLS VPNs—maximum number of VPLS virtual private networks per switch.	BlackDiamond 10808 BlackDiamond 12800 R-series BlackDiamond 20808	2,000 point-to-point 2,000 point-to-point 2,000
VPLS peers—maximum number of VPLS peers per switch.	BlackDiamond 10808 BlackDiamond 12800 R-series BlackDiamond 20808	16 16 64
VPLS pseudo wires—maximum number of VPLS pseudo wires per switch.	BlackDiamond 10808 BlackDiamond 12800 R-series BlackDiamond 20808	2,000 2,000 2,000
VRRP (maximum instances)—maximum number of VRRP supported VLANs for a single switch.	All platforms with Advanced Edge license or higher	128
VRRP (maximum VRID)—maximum number of unique VRID numbers per switch.	All platforms with Advanced Edge license or higher	7
VRRP (maximum VRIDs per VLAN)—maximum number of VRIDs per VLAN.	All platforms with Advanced Edge license or higher	7
VRRP (maximum ping tracks)—maximum number of ping tracks per VLAN.	All platforms with Advanced Edge license or higher	8
VRRP (maximum ping tracks)—maximum number of ping tracks per VRRP Instance under 128 VRRP instances. Hello interval: 100 milliseconds Frequency: 3 seconds Miss: 3 Hello interval: 1 second Frequency: 3 seconds Miss: 3	All platforms with Advanced Edge license or higher	 2 4
VRRP (maximum iproute tracks)—maximum number of IP route tracks per VLAN.	All platforms with Advanced Edge license or higher	8
VRRP—maximum number of VLAN tracks per VLAN.	All platforms with Advanced Edge license or higher	8

Table 37: Supported Limits

Metric	Product	Limit
XML requests—maximum number of XML requests per second. **Note**: Limits are dependent on load and type of XML request. These values are dynamic ACL data requests.	BlackDiamond 8800 c-series with 100 DACLs	
	with 100 DACLs	10
	with 500 DACLs	3
	BlackDiamond 12800 series with MSM-6R	
	with 100 DACLs	10
	with 500 DACLs	3
	Summit X450a and X650	
	with 100 DACLs	4
	with 500 DACLs	1

a. An ACL mask defines a unique match criteria and relative rule precedence. Masks are automatically generated based on the contents of an access-list policy. Only adjacent rules within the policy that have identical match criteria will utilize the same ACL mask. For this reason, it is advantageous to list all rules with the same match criteria together unless a relative precedence with other policy rules is required. Using VLAN-based or wildcard ACLs requires the ACL masks to be allocated on every port in the system.
b. The table shows the total available; see the note included in PD3-77983510.
c. Applies only if all enabled BlackDiamond I/O modules are BlackDiamond 8800 c-series modules.
d. Effective capacity varies based on actual IP addresses and hash algorithm selected, but is higher for BlackDiamond 8800 c-series modules and Summit X650 switches compared to BlackDiamond 8800 a-series and e-series modules and Summit X450a switches.

3 CHAPTER Open Issues, Known Behaviors, and Resolved Issues

This chapter describes items needing further clarification and behaviors that might not be intuitive. The numbers shown in column one of the following tables are for internal reference and can be ignored.

This chapter contains the following section:

- Open Issues on page 69
- Known Behaviors on page 83
- Resolved Issues in ExtremeXOS 12.3.4-patch1-3 on page 85
- Resolved Issues in ExtremeXOS 12.3.4-patch1-1 on page 86
- Resolved Issues in ExtremeXOS 12.3.4 on page 88
- Resolved Issues in ExtremeXOS 12.3.3 on page 96
- Resolved Issues in ExtremeXOS 12.3.2-patch1-4 on page 98
- Resolved Issues in ExtremeXOS 12.3.2-patch1-2 on page 99
- Resolved Issues in ExtremeXOS 12.3.1-patch1-2 on page 100
- Resolved Issues in ExtremeXOS 12.3.1-patch1-1 on page 100
- Resolved Issues in ExtremeXOS 12.3.2 on page 101
- Resolved Issues in ExtremeXOS 12.3.1 on page 104

Open Issues

Following are the open issues for supported features in ExtremeXOS 12.3.4. They are organized into the following sections:

Table 38: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-910088928	The following error message is displayed when downgrading a switch from ExtremeXOS 12.3 or later to ExtremeXOS 12.2 or earlier. `Error: child process exited abnormally.`

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-761201951	In ExtremeXOS 12.3, if there is only a single MSM in an MSM-B slot, the 8900-G96T-c and 8900-10G24X-c I/O modules may reset a couple of times before becoming operational. This issue may occur when: • The chassis reboots • These I/O modules are disabled and enabled • The I/O modules are inserted into the chassis
PD4-758181807	Non-combo ports with a 10/100/1000BASE-T SFP inserted in a switch with a link up, flap if any other two ports are disabled. **Workaround:** Disable ports one at a time.
PD4-730820249	If a route prefix is more than 24, only 100,000 routes are stored in the hardware. For the route prefixes less than 24, then 512,000 routes are stored in the hardware.
PD4-749060484	Errors are seen when a configuration having identifiers (SNMPv3 user name/EAPS domain name) with special characters are loaded through a script.
PD4-757870353	Running diagnostics on the master MSM generates errors such as subsection reported as failed, conduit errors, and HAL.IPv4FIB/HAL.IPv6FIB. These log messages do not appear to have any impact on the successful completion of diagnostics on the master MSM.
PD4-749280880	Installing firmware fails and displays the following message: `tftp: server says: Wrong TFTP State`
PD4-718946965	Directed broadcast traffic is not being forwarded.
PD4-740255437	Policy files are not refreshed when generating 30,000 rules.
PD4-734160746	In a private VLAN spanning two switches, when one of the switches has loopback-port configured and the network VLAN port between the switches is a load-shared port, if the loopback port is deleted and later re-added, the first packet received in the member port can be dropped. Subsequent packets are forwarded correctly.
PD4-749682632	You cannot run the `configure port auto on` command on XGM2-2bt ports.
PD4-717942168	FDB entries are not learned for L2 broadcast traffic after an MM failover.

PD4-722565502	Hot insert of a PSU or reseating an AC plug on a PSU causes the following error messages on a BlackDiamond 20800 series switch and causes the `show power budget` command to read the wrong value for the PSU.
	`* BD-20804.25 #`
	`########### CRITICAL ERROR`
	`devmgr: dmps.c:563: power_add(): REASON: total->volt[i] == p2->volt[i]`
	`* BD-20804.26 # show power budget`
	`Watts`
	`PS State at 48V`
	`----------`
	`1 Powered On 2340.00`
	`2 Powered On 3480.00`
	`3 Powered On 6960.00`

PD4-733230780	MAC security does not work on a PVLAN.
PD4-646084932	An FDB entry for a non-isolated VLAN is not show in the output of the `show fdb` command after disabling and enabling an I/O module.
PD4-742951283	An I/O slot fails due to a Tx data memory overflow and generates the following error message: `<Erro:HAL.Card.Error> MSM-A: skylerHC-1184: skyler12 on slot 1 (4 errors):TX Data Memory Overflow: reg 0x32 value 0x01000001 wanted (0x00000000) got (0x01000000)`

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-730221901	Refreshing an ACL on an MM-B while running an MSM failover on MM-A causes MSM-A to lose the ACL configuration on MSM-A.

PD4-749215601	Running the install firmware command generates the following error message:
	`reading from file /dev/mtd0 failed: Cannot allocate memory`
	`.FAILED: SLOT 18, MM PMON`
	`UPGRADE NOT REQUIRED: SLOT 18, MM Spanky Primary`
	`Error:can't read "pfc": no such variable`

PD4-737811617	Creating a blackhole FDB entry on a BlackDiamond 12800 series switch still forwards traffic from a BlackDiamond 20808 to a BlackDiamond 12800.
PD4-757707981	Proxy ARP does not work in a PVLAN.
PD4-552222911	DUT is hanging with a busy message (dots) after configuring 7,250 ingress dynamic ACLs with conduit errors.
PD4-561358261	If you create a super VLAN and a sub-VLAN in different virtual routers you are able to bind the VLANs. Super VLANs and sub-VLANs should belong to the same virtual router.
PD4-631700490	When PIM and PIM snooping are enabled on the same VLAN, and if that VLAN happens to be a PIM egress VLAN, traffic forwarding does not happen on the VLAN.
PD4-690958111	After running the `unconfigure switch all` command, an I/O module may stick in the booting state, resulting in the switch continually rebooting.
PD4-624062541	Jumbo frames are not mirrored to monitor ports on Summit X650-24t switches when one-to-many mirroring is configured.
PD3-131866114	BlackDiamond 8800 series and Summit series switches do not support LPM hardware forwarding using IPv6 routes with a mask length greater than 64 bits. As a result, IPv6 packets may be forwarded in hardware to a different next hop by using a route with a mask length less or equal to 64. This occurs even though a route with a mask length greater than 64 with the correct next hop is known in software, but not in hardware. The following log message is logged when the first route with a mask length greater than 64 is added: `<Noti:HAL.IPv6FIB.Notice> MSM-A: vrId 2 dest 3218:: / 77 nexthop : IPv6 routes w/ mask len > 64 not supported in HW. Packets may be forwarded using less-specific routes.`
PD4-491938681	A user cannot change the password for a local administrator account when logged in using a RADIUS administrator account.
PD4-489592307	DUT is not sending an "icmp destination unreachable" message to the source when it receives a jumbo packet with a "dont fragment" bit message. This applies to BlackDiamond 10800 and BlackDiamond 20808 switches only.
PD4-489359602	Conflicting Link Fault Signal (LFS) alarms are shown when disabling local ports.
PD4-489142320	One Gigabit ports set to `auto on` flap twice during a switch reboot.
PD4-486972363	Bandwidth for the detour Label Switched Paths (LSPs) are calculated from the point of local repair (PLR) node to the egress node, and not from the PLR node to the merge point (MP). Therefore, detour LSP is signaled only when there is enough bandwidth that is equal to or greater than the requested bandwidth for the detour LSP from the PLR node to the egress node.
PD4-448603051	The `unconfigure pim vlan` command clears (unconfigures) an SSM configuration on a VLAN but the VLAN continues to operate in the SSM VLAN, even after running the `disable pim` and `enable pim` commands.
PD4-470597781	When a local VLAN with 32 subnet-mask IP addresses is down, the dynamic route with the same 32 subnet-mask IP addresses is not reachable.
PD4-460892051	Installing different versions of an ExtremeXOS image and an SSH image displays the following error message: `Failed to install image- cannot read spec file" in the log "upgrade failed installation:got error from installer DLL"`

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-460157940	Disabling IPv6 forwarding causes neighbor cache entries to become static.
PD4-464587012	All unicast traffic routed by Multiprotocol Label Switching (MPLS) is stopped when penultimate hop popping (PHP) is enabled on all MPLS VLANs. Virtual Private LAN Services (VPLS) traffic is not impacted.
PD4-448681226	The `show l2stats` command does not count address resolution protocol (ARP) packets to the CPU, even though the packet goes to the CPU.
PD4-482808326	When a configuration is saved as a default.xsf configuration, errors are seen when the configuration comes up after running the unconfigure switch command.
PD4-467944506	With IPv6-in-IPv4 tunnels, routes are not learned through RIPng after the port in the tunnel source VLAN is changed from tagged to untagged or vice versa.
PD3-202580681	Enabling IP route compression may cause temporary slow path forwarding for some of the L3 traffic.
PD3-192821161	For Summit X650, X450 a-series and e-series switches, and the BlackDiamond 8800 series of switches, the maximum number of supported IP interfaces is 512 (IPv4 and IPv6 combined). If there are more IP interfaces configured, the following log message is displayed: `12/11/2007 06:06:14.73 <Info:HAL.VLAN.Info> Maximum # of IP interfaces (512) already configured. Could not add IP address 0x0A010101 mask 0xFFFFFF00`
PD3-132775269	Telnet sessions between two switches using two windows causes one session to hang if both sessions are edited but only one sessiopatch5-1n is saved.
BlackDiamond 10808 Switch	

PD3-124124316	The following error messages are shown in the log when running 50,000 unicast routes with ECMP enabled:
	`02/05/2007 15:38:37.89 <Warn:HAL.Sys.Warning> MSM-A: hal: Reached maximum otp index allocation`
	`02/05/2007 15:38:37.56 <Warn:HAL.Sys.Warning> MSM-A: Previous message repeated 999 additional times in the last 1 second(s)`

PD3-68165111	Various memory locations that are part of the forwarding and routing tables are parity protected on BlackDiamond 10808 switches. The functionality should be turned on so that faults are detectable.
BlackDiamond 12800 Series Switch	
PD4-750488331	When a BlackDiamond 12800 series switch with 4,000 BVLANs and 2,000 SVLANs configured and IGMP snooping disabled, the switch crashes when enabling sharing with LACP on BVLAN ports. This configuration may also cause an MSM to go into a failed state.
PD3-187808062	A BlackDiamond 12800 series switch does not show a warning message on the console for down revision MSM and I/O modules after initialization.
PD3-125511903	A system failure occurs with a signal 10 error when performing a run msm-failover immediately after the backup MSM is in-sync
PD3-86738591	Traffic queue statistics are incorrect when a BlackDiamond 12800 series switch is configured to work in H-QoS mode. Statistics counters are accurate when the switch is configured in the PRI mode.
BlackDiamond 20808 Switch	
PD4-1215784550	I/O slots that are configured for a sys-recovery shutdown are not going to the shutdown state when a hardware error occurs on the slot.

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description

PD4-1205978779	Rebooting a BlackDiamond 20800 series switch after installing a new ExtremeXOS image displays the following critical error messages:
	`BD-20808.5 # reboot`
	`Are you sure you want to reboot the switch? (y/N) Yes`
	`############################## CRITICAL ERROR`
	`##############################`
	`devmgr: dmps.c:563: power_add(): REASON: total->volt[i] == p2->volt[i]`
	`######################################################################`
	`############################## CRITICAL ERROR`
	`##############################`
	`devmgr: dmps.c:563: power_add(): REASON: total->volt[i] == p2->volt[i]`
	`######################################`

PD4-927699591	Running an ExtremeXOS 12.3 image in the Delay Measurement Message (DMM) originator, and a later version of ExtremeXOS on a BlackDiamond 20808 on the other end, Y.1731 does not work. The Delay Measurement Reply (DMR) is received by the originator, but rejected due to an incorrect check in the application.
PD4-865667843	PFC uC fails to turn off the power supply once it detects a failed power supply. The bad power supply takes 2.5 minutes to boot up. The PFC uC reads the I/O PIN associated with the PSU alarm PIN and fails the PSU, but it does not power down the bad PSU.
PD4-843054490	Fans go into a failed/empty state and I/O modules are powered off after upgrading firmware on a BlackDiamond 20808 using the force option.
PD4-861903959	When the backup MM is not yet synced (because of `run msm-failover` or running diagnostics) and one performs an MM-failover, the command is accepted, however, both MMs will then reboot. **Workaround:** Make sure that `run-time diagnostics` command shall check both MMs are sync before running the diagnostics.
PD4-853995054	The process upgrade_fw crashes with signal 11 when downgrading a BlackDiamond 20808 switch.
PD4-861903871	After loading image ExtremeXOS 12.3.2.5 on a BlackDIamond 20808 switch, the show log command output shows the following error: `<Erro:HAL.Sys.Error> MM-B: Unable to get odometer for power supply 5` The same log error is displayed when a failover occurs on MM-A.

PD4-847978862	A monitor port does not come up after enabling a port after a DUT is rebooted with a disabled monitor port. The following error is displayed while rebooting:
	`MM-A: voyagerCardPowerEnabl`
	`e:1144:- Invalid System mode information returned from dm.dmGetSystemMode`
	`() = 33`
	`08/15/2009 16:47:02.47 < Erro:HAL.Card.Error > MM-A: voyagerCardPowerEnabl`
	`e:1144:- Invalid System mode information returned from dm.dmGetSystemMode`
	`() = 33`

PD4-851358292	During a firmware upgrade, the "watchdog expiration warnings" and "kernel thread stuck" messages may appear on an MM console.
PD4-845017407	The following error is seen when running the install firmware command on a GM-40XB module in a BlackDiamond 20808 switch: `<Erro:HAL.Card.PowerStateError> MM-A: A request to power down slot 8 failed - returning a completion code of -1.`

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-854675001, PD4-860561781	A BlackDiamond 20808 switch with a single MM running ExtremeXOS 12.3.2 software fails to upgrade during a firmware upgrade process. It also fails during the firmware downgrade process. You may need to try and install the firmware multiple times.
PD4-803757411	Configuring a meter on a BlackDiamond 20808 switch to limit broadcast or multicast traffic (rate-limit flood-traffic) is not possible without an HQoS license.
PD4-748388236	Egress rate shaping does not work after running the `save` and `reboot` commands if an egress port is not specified. Configured egress rate-shaping does not work on a newly inserted I/O module if an egress port is not specified. **Workaround:** Unconfigure the ACL and re-apply the same ACL.
PD4-748173770	Executing run time diagnostics using the `run diagnostics normal/extended` command on a GM-40XB module can result in the I/O module locking up after diagnostics are complete and ExtremeXOS tries to bring the I/O module back online. It is recommended that you do not execute run time diagnostics on these I/O modules in a live network.
PD4-728449478	The ucRx: micro controller returns the following error message while running diagnostics: `reset hello error Unrecognized command: hello feConfig = fffe2848`
PD4-756263261	The `show fabric` command in an ExtremeXOS environment shows the fabric information is XFM-2.
PD4-728354005	On a BlackDiamond 20808 switch, running the `show tech-support` command when I/O modules or fabric slots are in the process of booting, or are otherwise not operational, may cause `sys-health-check` output to display fabric link faults, when there are actually none. This is a transient state. Once the modules are operational, only actual fabric link faults are displayed in the command output.
PD4-756309458	When configuring remote mirroring using a BlackDiamond 20808 switch as the intermediate or destination switch, the remote mirroring port does not receive IP multicast traffic if the monitor port of the source switch is tagged. The traffic is dropped in the transit VLAN. **Workaround:** Configure the monitor port of the switch as an untagged port so that IP multicast traffic will pass through the transit VLAN.
PD4-756213981	BlackDiamond 20808 multicast rate-limit supports a minimum 10 Mbps.
PD4-667561942	The command output for the `show fdb hardware` command does not include the blackhole MAC address.
PD4-603229266	A slot reboots when load sharing is disabled and MVR is disabled and re-enabled.

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description

PD4-587169451	Running the `install firmware` command may generate numerous error messages in the Event Management System (EMS) logs. These messages do not impact system performance.
	`<Erro:HAL.Sys.BackupPFCFailed> MM-A: Backup Power Fan Controller (#2) has failed`
	`<Erro:EPM.Upgrade.Fail> MM-A: Upgrade failed, script: install bootrom failed`
	`<Erro:HAL.Sys.GetPFCMastershipFailed> MM-A: Failed to get Power Fan Controller Mastership for slot #17`
	`<Erro:HAL.Sys.OtherPFCFailed> MM-B: Power Fan Controller in slot 17 has failed to communicate with EXOS`
	`<Erro:HAL.Sys.SetBackupPFCToMaster> MM-B: An error happened and is now setting the backup Power Fan Controller #2 to be the master Power Fan Controller`
	`<Erro:HAL.Sys.MasterPFCFailed> MM-B: Master Power and Fan Controller (#1) has failed`
	`<Crit:HAL.Fabric.Critical> MM-A: pioennerBringDownFE200 Bringing Down FE200 on XBAR 1 as the command EXTRUC_FE_READ_CMD Failed, Reason: UCPIPE_ERROR`
	`<Erro:HAL.Sys.Error> MM-A: Slot XBAR1: 23918 FE 0 read 0xb50`

Summit Family Switches	
PD4-841960995	Running diagnostics on a Summit X450a-48t fails with the following error: `Loopback Phy Fiber : Make Connection Failure on unit-[0] port-[24] Last`
PD4-274249122	If a Summit switch populated with an XGM2-2bt module is rebooted, a false link up is seen on 10G links connected to the XGM2-2bt ports approximately 30 to 50 seconds before the switch has fully booted.
PD4-375560851	When configuring or unconfiguring a mirroring loopback port, the user may notice several unexpected port state transitions on a Summit X650 switch.
PD3-201233169	A condition exists with some Mitel IP phones that are attached to an ExtremeXOS PoE enabled platform that requires that you disable and enable inline power in order for the phone to become active.
PD3-131375426	Configuring autopolarity does not work on the combo ports on the Summit family switches.
PD3-77711011	The word “slot” should not be included in the output of the `show inline-power stats` command.
PD3-77711042	The Priority column should not display in the output of the `show inline-power configuration` CLI command when running the command on a Summit X450-24p PoE switch.

PD3-43606168	If sFlow does not have a collector configured using the `configure sflow collector` command, the `show log` command generates the following messages:
	`<Noti:sflow.debug.AddCntSmplFail> : Could not add the counter sample for port 0:1020, as receiver is not configured.`
	`<Noti:sflow.debug.AddCntSmplFail> : Previous message repeated 61 additional times in the last 1200 second(s).`

PD3-40266236, PD3-40233121	Traffic on load share ports configured as redundant ports incorrectly moves to other ports in the load share group during link transition.
SummitStack	
PD4-1036384285	SRP port utilization is temporarily shown as high on a slave switch after power cycling.
PD4-937401531	Enabling mirroring on a 512 G stack running the latest 12.3.3.5 image in default standard mode, mirroring works properly. However, if you reset the stack to enhanced mode, and then back to standard mode, mirroring does not work correctly.

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-928567091	Running the `synchronize` command on a Summit X650 in a SummitStack causes the system to time out and the stack to not synchronize for an extended period of time. This also results in the master node no longer being accessible.
PD4-787052219	When a backup slot reboots and comes up, the switch experiences multiple stack link flaps.
PD4-790755381	Two of the four stack ports in a Summit stack are shown as blocked even though none of the ports are in the stack.
PD4-452191011	FDB entries that are programmed in a hardware table are not shown in the `show fdb` output in a stacking configuration when the front panel port flaps.
PD3-209191768	After running the `disable port all` command on a SummitStack, some port LEDs may sometimes light green even though ports are not up.
PD3-204744742	IPv6 neighbor-discovery in a management VLAN in a SummitStack resolves to the node address of the stack master, instead of the stack MAC address.
ACL	
PD4-722565430	IPv6 ACL address masks are not working correctly after rebooting a switch.
PD4-720906222	Performing a save and reboot on a DUT with 5,000 dynamic ACLs causes one module to go into a failed state while the remaining modules stay in ACL sync even after one hour.
PD4-750014887	If a failover occurs during a “refresh policy” the HAL process dies on a new master MSM. **Workaround:** Avoid performing a policy refresh if switching from one MSM to another.
PD4-450852442	When configuring an ACL and using the keyword `denyAll` in the `create access-list` command, the action is not stopping the ARP reply packets.
PD4-506754505	When creating a dynamic egress ACL to deny all traffic, the traffic still hits the address resolution protocol (ARP) reply counter but not denying the packets.
PD4-465744039	ACL counters are not hitting the Internet Group Management Protocol (IGMP) packets.
PD3-192175421	The following error message is displayed when installing a policy file with more than 4,096 rules: `Error: Unable to bind traffic queue tq4095 to port 1:1.`
PD3-118223441, PD3-57946832, PD3-26612201, PD3-24794592	Before changing a VLAN tag, make sure you unconfigure all the ACLs applied to the VLAN. Also, after changing the tag, reconfigure the ACLs to be applied on the VLAN.This applies to BlackDiamond 10808 and 12800 series switches only.
PD3-126824622	If an IPv6 address is included in a configuration, use ICMPv6 for the protocol. ICMP (IPv4) should not be allowed.
PD3-28320363	In IPv6, the encapsulate value is “next header,” which is not currently a valid attribute.
BGP	
PD3-209442785	Static multicast routes are not exported using MBGP. However, a static unicast route can be exported using MBGP.
CLEAR-Flow	
PD4-278443631	CLEAR-Flow commands display on platforms that do not support this capability, including the Summit X150, X250, X350, and X450e series switches, as well as BlackDiamond 8800 non-c-series switches.
CLI	
PD3-71725881	When configuring an optional name for the time zone/DST, the time zone name truncates at seven characters. The system default is six characters.
PD3-57182431	For the incoming traffic with alignment errors, the "RX Align" counter in the output of the `show ports <port number> rxerrors` command is not incremented. Instead the "RX CRC" counter is incremented.

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
Control Protocols	
PD3-125288233	MSTP fails to converge when a vMAN Ethernet type is set to 0x8100 on a BlackDiamond 12800 series switch.
Diagnostics	
PD4-285686375	After upgrading to the latest ExtremeXOS 12.1.2.17 image, the following EEPROM error message appears in the log: `07/03/2008 12:30:03.72 MSM-A: MSM-B card eeprom checksum failed. 0xb97 != 0xb96`
EAPS	
PD4-749215481	Disabling the EAPS master primary port when there are no other ports configured on a protected VLAN will cause a disruption of L2/L3 multicast traffic. **Workaround:** Enable loopback on all EAPS protected VLANs.

PD4-471892924	Restarting the EAPS process on a controller generates the following error messages on a console, but does not impact switch performance.
	`BD-8806.80 # restart process eaps`
	`Step 1: terminating process eaps gracefully ...`
	`Step 2: starting process eaps ...`
	`Restarted process eaps successfully`
	`BD-8806.81 # ERROR:VmgrProtocolIfRegister protoId:0 numIf:1`
	`ERROR:VmgrProtocolIfRegister protoId:0 numIf:3`
	`ERROR:VmgrProtocolIfRegister protoId:0 numIf:1`

PD3-104885349	When a shared link comes up, temporary traffic loss may occur until FDB entries are aged. Aging occurs by default every five minutes. **Workaround:** To reduce traffic loss, reduce the default age time.
PD3-54870537, PD3-45729158	Under the following circumstances, EAPS control packets received on the wrong VLAN may be treated and processed. **1** Create a EAPS ring with three or more switches with a BlackDiamond 10808 as one of the transit switches, directly connect to the master with load sharing enabled. **2** Enable load sharing on the primary port of the master switch (the master port should be higher than the group port so that the configuration master and current master are different in load sharing). **3** Disable load sharing on the BlackDiamond 10808. **4** Show EAPS on the master switch; the domain state will be complete. **5** The control packets are transmitted on the current master and the BlackDiamond 10808 will receive the packets on the port that is not part of the EAPS VLAN.
ESRP	
PD4-464792522	A load-shared port in a host attach configuration is deleted without warning or error when sharing is disabled on the port.
PD3-52741820	Disabling a shared port results in the ESRP port restarting and the configuration disappearing.
IP Routing Protocols	
PD3-132508261	When issuing the `enable jumbo-frame port all` command on a BlackDiamond 8800, the MTU size for the VLAN is not configured. Sending 5,000 byte traffic works correctly. However, if you disable jumbo-frames on the egress port the error message `Packet too big` is displayed.

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
IPv6 Unicast	

PD3-139714881	The following info level messages appear in the log when link aggregation is configured on a VLAN associated with an IPv6 6-to-4 tunnel:
	`05:01:49.04 <Info:HAL.VLAN.Info> MSM-B: pibIPv6InstallTunneledLinkLocalFilter: Could not install filter unit 12, Entry exists`
	`04/24/2007 05:01:49.05 <Info:HAL.VLAN.Info> MSM-B: pibIPv6InstallTunneledLinkLocalFilter: Repaired filter unit 12`
	These messages do not affect the operation of the switch.

IS-IS	
PD3-190952336	When one or more point-to-point interfaces are present on a router with IS-IS graceful restart enabled, the graceful restart may fail for the entire node. ***Workaround:*** Do not use point-to-point links if graceful restart is also used.
PD3-183234835	When one or more point-to-point interfaces are present on a router with graceful restart enabled, the graceful restart may fail for the entire node. **Workaround:** Do not use point-to-point links if graceful restart is also used.
Mirroring	
PD3-202013298	The valid value range for tags on remote-mirroring VLANs is 1 to 4,094. Use these values for configuring the remote tag in the `enable mirroring` command.
PD3-202013281	Learning is disabled by default on remote mirroring VLANs. Running the `enable learning` command on those VLANs may cause a loss of remote mirrored traffic.
PD3-79867211	If you create a load-sharing group (trunk), then enable mirroring to a port, the software allows you to add the mirroring port to the load-sharing group.
PD3-28378521	Enabling load sharing on a port that is being mirrored causes the mirroring to stop.
MPLS	
PD4-476351932	Performing a `restart process mpls` or `restart process ospf` on a spoke node in an HVPLS setup causes the Label Distribution Protocol (LDP) peer to go down with the core node. **Workaround:** Disable and enable MPLS.
PD4-475414370	The following warning message is seen numerous times after changing VLAN Virtual Private LAN Services (VPLS) mappings: `<Warn:MPLS.LDP.InternalProb>`
PD4-475414505	In more complex topologies, detour Label Switched Path (LSP) connections are not set up.
PD4-475414558	Changing a Label Switch Router (LSR) ID causes all Label Distribution Protocol (LDP) peers to go into a NonExistent state.
PD4-452308541	The secondary pseudo wire on an Extreme Standby Router Protocol (ESRP) master switch does not take the secondary core node pseudo wire after the primary core is rebooted.

PD4-438179103, PD4-385791701	During an MSM failover on a ingress Label Switch Router (LSR), the following error message in the displayed in the egress LSR:
	`MSM-A: 0x00002102-34 (327) Error occurred while querying the Route.`
	`09/22/2008 05:05:12.27 MSM-A: 0x00002102-34 (327) Error occurred while querying the Route.`

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD3-208178928	Adding a static route with an MPLS LSP may cause one of the following problems: • If a static route is added with an MPLS LSP whose transport setting is "IP traffic deny," the route is displayed with an invalid nexthop in the `show iproute mpls` command output. • When a static route is added with an MPLS LSP that is not present in `show iproute mpls` command output. For example, if there are 17 RSVP-TE LSPs to the same destination, only 16 LSPs are eligible for carrying traffic because of a maximum ECMP path limit of 16. Adding static routes with 17 LSPs results in the same observation.
PD3-157687121	ExtremeXOS software uses Control Channel Type 2 to indicate router alert label mode. In MPLS Router Alert Label mode, VCCV packets are encapsulated in a label stack. However, the existing VCCV packets are sent like a stack without any PW label.
PD3-184989177	When an `LDP advertise static` setting is set to `all`, all static routes are treated as egress routes and egress LSPs are created. That is, a label is generated and advertised for the static route. If the router at the end of the static route advertises a label matching that static route, the LSP that was previously an egress LSP becomes a transit LSP. An ingress LSP should also be created whenever a label is received, however, the ingress LSP is never created. **Workaround:** Do not use the `LDP advertise static all` configuration in situations where an ingress LSP for a static route is required.
PD3-202184409	Adding/deleting a LAG sharing port changes the VLAN status, which is causing an OSPF/MPLS reconvergence.
PD3-139423053	Running the `show mpls rsvp-te lsp summary` command on a system configured with 2,000 ingress LSPs takes an excessive amount of time to process.
PD3-121985381	You cannot configure an IP-MTU that is greater than the configured jumbo frame size. However, when the jumbo frame size is configured using a smaller value than the IP-MTU, the configuration is accepted and the traffic is forwarded using the larger packet sizes.
PD3-118914021	When an OSPF neighbor is configured between two LSRs and MPLS, and an LDP session is configured between them, the ABR router advertises a default route to the internal router. The default route is not mapped to a label in the internal router because the ABR does not advertise the label
PD3-92653036	The `show mpls label`, `show mpls rsvp-te label`, and `show mpls rsvp-te lsp` command output currently does not display egress LSPs using advertised implicit NULL labels.
PD3-111544904	When a router receives an explicit NULL label, it is incorrectly treated as an implicit NULL label, so rather than sending label 0, no label is sent.
PD3-93218551	If either an egress or a transit LSP traverses the system, and an MPLS labelled packet containing a router alert label is received, that packet is not forwarded.
PD3-93069318	Only VLANs configured as protocol any should be added to MPLS.
PD3-104731701	When a traceroute is performed by setting the MPLS TTL to the IP TTL, ExtremeXOS does not correctly send back an ICMP response. The result is "*" characters in the traceroute for the routers that timed out. If a route is available, ExtremeXOS should attempt to send back an ICMP response.
PD3-93630853	LDP should not advertise a label mapping for a direct VLAN that does not have IP forwarding enabled.
PD3-204793983	The egress rate-limit shown in the command output of the `show port utilization` command is not correct.

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD3-203917264	When an explicit route object (ERO) is changed for an LSP session that is up, the LSP that is already up is not torn down. LSP stays up based on the older values. The retry count continues to increment as LSP tries to come up with new values by querying routes every 30 seconds. This is done while the earlier LSP session is still active using the previously configured values. See the retry count in the command output for the `show mpls rsvp-te lsp <lsp_name> detail` command.
Multicast	
PD3-203759919	After disabling and enabling Multicast Source Discovery Protocol (MSDP), the peers do not come up. **Workaround:** Run the `disable msdp` command followed by the `enable msdp` command
PD4-715473099	The multicast traffic receive rate for 10,000 multicast groups takes an excessive amount of processing time.
PD4-734160880, PD4-697230006	Extreme Networks does not support the same (S,G) stream entering a switch through multiple constituent VLANs of a private VLAN or VLAN aggregation. If a source moves from one constituent VLAN to another, run the `clear igmp snooping` command.
PD4-551040931	Multicast traffic is dropped after disabling load-share port links using MVR.
PD4-581950231	Multicast traffic is not received even though the rendezvous point (RP) tree and source information is shown in the PIM cache table
PD4-614541490	VPLS traffic stops after configuring MAC limit-learning.
PD4-521915271	The Internet Group Management Protocol (IGMP) group reports may occasionally change from Version 2 to Version 3.
PD4-449743037	Group entries are not timing out on Multicast VLAN Registration (MVR) and non-MVR VLANs even though snooping is disabled on the non-MVR VLAN.
PD4-493683561, PD4-449901506	Disabling multicast flooding on a port may result in ARP requests being blocked.
PD4-339945634	When a load-sharing group is a member of a mirrored VLAN, packets ingressing on the member of the load-sharing group in the mirrored VLAN should be mirrored. On the Summit family switches and BlackDiamond 8800 modules, packets ingressing on member ports other than the master port of the load-sharing group in the VLAN are not mirrored. **Workaround:** Packets ingressing non-master ports in the load-sharing group on the mirrored VLAN can be mirrored by adding virtual port mirroring filters for each of the non-master member ports.
PD4-318846862	L3 multicast traffic in a Virtual Private LAN Services (VPLS) vMAN is forwarded twice when the Label Switched Path (LSP) is changed to port sharing and is then changed back.
PD3-128093864	MSDP Source-Active responses received from non-RPF peers are not processed.
PD3-189399801	The command output for the `show pim rp-set` command does not always show all the Rendezvous Points for a multicast group. **Workaround:** Do not configure the group address in the rp-list with a non-zero host portion.
PD3-78144711	The `show ipstats` command does not increment IGMPv3 statistics.
PD3-79383551	IGMPv3 Report Record type "5" does not work as expected when sent after a type "2" or a type "4" message.
PD3-2841008	With PIM, when small-sized multicast streams are ingressed at line rate, there is an initial packet drop of 50% to 70%. This is seen on BlackDiamond 8800 and Summit X450 switches.
Network Login	

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-909114333	When disconnecting a network login authenticated client who is connected through a dynamically created network login VLAN, process mcmgr crashes and generates the following log messages. `***** Process mcmgr pid: 518 died with signal:11`
PD4-763062511	Hitless upgrade is not supported for network login in ExtremeXOS 12.3.1.
PD4-752731351	You should not be able to enable network login if a VLAN is a VLAN-aggregation subVLAN. The system should generate a syntax error.
PD4-616376481	The following error message is displayed during NetloginMac_V2 regression after rebooting a switch with the `save` option set to `yes`: `<Erro:HAL.Card.Error> MSM-A: Unable to remove broadcast MAC entry for VLAN/VMAN while changing tag from 1 to 3999`
PD4-468366251	A network login client is not authenticated if the username is 32 characters. Only 31 character user names are supported, even if the user can create a 32-character username.
PD4-427423116	When a dot1x client is authenticated at multiple VLANs, the output of the `show netlogin port` command shows the client is sometimes authenticated at the local server and other times at a RADIUS server. **Note:** This occurs when dot1x and MAC authentication are enabled on the port.
Network Services	
PD3-166858162	On a Summit X250e-24x switch, if one of the combo ports is redundant to a front panel port, after rebooting, the second combo port does not come up if the primary port for the SRP is active.
PD3-93829391	Configurations using a VR-Mgmt interface as a RADIUS client IP may not load at boot-up. However, using an interface in VR-Default will load correctly.
PD3-67431351	Configuring an ingress traffic queue and an egress traffic queue association to multiple ports in sequential order generates the following error: `Egress queue already associated to this ingress queue Configuration failed on backup MSM, command execution aborted!`

PD3-67727590	Creating two sets of vMAN ACLs with 4000 entries each and performing a vMAN ID translation on each ACL may generate the following error:
	`.....03/15/2006 17:57:28.84 <Info:pm.config.openingFile> MSM-B: Loading policy RLL20k from file /config/RLL20k.pol`
	`...03/15/2006 17:57:32.46 <Info:pm.config.loaded> MSM-B: Loaded Policy: RLL20k number of entries 4002`
	`.........Error in alloc txmi txmi 0x9f2 txmdi 0xffffffff`
	`Error in alloc txmi txmi 0x9f4 txmdi 0xffffffff`
	`Error in alloc txmi txmi 0x1102 txmdi 0xffffffff`
	`Error in alloc txmi txmi 0x9f6 txmdi 0xffffffff`
	`Error in alloc txmi txmi 0x9f8 txmdi 0xffffffff`

OSPF	
PD3-133427241	When an OSPF external filter is configured to deny routes, not all routes are being filtered.
QoS	
PD3-16578296	The member ports of a trunk will retain the QoS profile configuration of the trunk (based on the master port) after load sharing is disabled, or if a port is removed from the trunk.
RMON	
PD3-12950492	Issuing the `clear counter` command might cause a high number to be displayed in variables such as etherHistoryOctets, etherHistoryPkts, and etherHistoryTable.
ScreenPlay	

Table 38: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD3-111344472	ScreenPlay allows you to configure DHCP but you cannot enable DHCP.
Security	
PD3-205012219	A source-ip-lockdown dynamic deny acl counter is not working properly and increments valid traffic from a trusted client.
PD3-186939931	Ingress mirroring is not working for DHCP snooping when snooping is enabled on BlackDiamond 12800 series switches. DHCP snooping works correctly when DHCP snooping is disabled.
PD3-75120608	The `unconfigure radius` and `unconfigure tacacs` commands do not reset the timeout value to the system default of 3 seconds.
sFlow	
PD3-205380274	sFlow is not working on ports that are included in BVLANs, SVLANs, and occasionally vMANs. sFlow can be enabled and configured for ports in BVLANs, SVLANs, and vMANs, but nothing is sent to the sFlow collector.
SNMP	
PD4-705730556	AES/3des users created using ExtremeXOS 12.3.1 software cannot be used for SNMP operations in ExtremeXOS 12.1 or earlier releases. This may cause the SNMP master to crash.
PD3-181304741	After inserting a XENPAK in a stack (XGM2-2xn, XGM-2xn) and performing an snmpwalk on the entityMib entPhysicalDescr variable, XGM- is always shown, not the complete module description.
PD3-39411271	icmpInMsgs counter will display the incoming ICMP packets for VR-Default only.
Spanning Tree Protocol	
PD4-492384091	When scaled to the maximum number of Rapid Spanning Tree Protocol (RSTP) domains with EMISTP port mode, an IGMP packet loops for a short period of time when a link flap occurs.
PD3-189927343	A temporary loop occurs when a root bridge is taken down by disabling all ports or powering down the switch.
Stacking	
PD3-136493921	If a switch is added to a stack whose master switch has a license level that is greater than the level of the switch, the switch will fail. The complete condition can be seen using the `show slot detail` command. In this state, the switch does not have AAA services available. You will only be able to log into the switch using the failsafe account that was last assigned to it. You must log into the switch to upgrade the license. If the switch is not using the failsafe account configured on the stack, you can use the `synchronize stacking` {`node-address` <node-address> | `slot` <slot-number>} command to copy the failsafe account information from the master switch to the failed switch NVRAM. You can also use the `configure stacking license-level` command to configure a license level restriction on the entire stack and then reboot the stack. Once the stack is restarted, there is no longer a license mismatch, enabling you to log into the switch and upgrade the license. From the master switch, run the `unconfigure stacking license-level` command to get the stack to operate at the desired license and then reboot the stack.
PD3-126650411	A stackable system with two or more nodes may experience random VRRP master/ backup flapping issues after an MSM failover when configured with the maximum 128 VRRP instances using the minimum advertisement interval of 100ms and maximum tracking entries.
WAN PHY	
PD3-101226461	When `show wan-phy` commands are run on non WAN PHY ports, the ports display the headers. It should only display the error `wan command is not supported on non-wanphy port 25`.

Known Behaviors

The following are limitations in ExtremeXOS system architecture that will not be resolved.

Table 39: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-757563008	After hot swapping an MM-A, the output for the `show power budget` command shows the wrong power information.
PD4-730473090, PD4-549927751	Running diagnostics on a slot and then running the `debug hal show sys-health-check` command shows an incorrect `bcmRX ?` message.
BlackDiamond 8800 SeriesSwitch	
PD4-1306132018	In the SNMP MIB, the values for ModuleconfiguredType and ModuleInsertedType for the 10G4Xc and 10G8Xc I/O modules are incorrect.
BlackDiamond 20808 Switch	
PD4-1004307581	You cannot create more than 2,000 ACL rules with ACL actions `meter` and `count`.

PD4-841530197	The `install firmware` command displays a lot of errors in the log and the HAL CPU goes to 99% capacity.
	`FE200 on XBAR 3 as the command EXTRUC_FE_WRITE_CMD Failed, Reason: UCPIPE_ERROR`
	`08/10/2009 02:58:43.26 MM-A: Error Register Write ExtremeFE200WriteUc Offset: a10 Value ffffffff for Fabric Slot: 3`
	`08/10/2009 02:56:32.29 MM-A: Slot-8 FAILED (3) Error Generic Error(-1) from HAL on CardExec POWER_OFF(10) for slot 8`
	`08/10/2009 02:56:32.29 MM-A`

PD4-932420175	A link does not come up on a BlackDiamond 20800 series switch when a mini-GBIC is connected to a GBIC in a third-party switch. **Workaround:** Run the `configure port auto off speed 1000 duplex full` command to configure a BlackDiamond 20808 switch, or third-party switch, to turn off autonegotiation and manually configure the speed as 1000 Mbps, and `duplex full`.

PD4-1004307843, PD4-1004307581	A policy file with 1,000 meters and counters cannot be reconfigured after applying a refresh policy.
	`# configure access-list irl1kmtrs port 8:35`
	`Error: Operation is not completed due to unavailability of counter resource`
	`Configuration failed on backup MSM, command execution aborted!`
	`# show access-list`
	`No entry found!`

PD4-842516648	Traffic is not distributed on LAG group ports when multiple ingress and egress MAC IP addresses are used.
PD4-615185171	LEDs are not working on the XFM. **Workaround:** Run the `show fabric` command to verify that all modules are in an operational state. Hot swap any that are not in an operational state and rerun the `show fabric` command.
PD4-669582350	MAC addresses are not learned in software on BlackDiamond 20808 switches with EAPS configured even after 20 seconds. This does not impact system performance. **Workaround:** Run the `show fdb hardware <MAC> <vlan name> slot all` command to verify the FDB entries.

Table 39: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-679100494	Hot swapping I/O modules in a fully populated chassis causes the modules to go into failed state for a short period of time causing the switch to reboot until it comes up in an operational state.
Summit Family Switches	
PD4-944608201	A Summit family switch shows an error when trying to apply a dynamic ACL using the `meter` action-modifier.
PD3-204517991	A Summit X250e-24X combo port link may come up with the correct speed but in half-duplex mode, even though the switch is configured as full-duplex mode when autonegotiation is set to off on both sides of the link. For the link to come up in full-duplex mode as configured, you must disable and enable the port, or restart the port.
ACL	
PD3-127190211	Using a BlackDiamond 10808 or a 12800 series switch, VLAN ACLs do not work when a vMAN EtherType is set to 0x8100. Incoming traffic is not matched against the rules in the ACL policy file and the traffic is forwarded without applying the matched rule in the policy file.
EAPS	
PD3-97153785	In a specific EAPS topology, if multiple shared links are down, a loop is created.
IGMP	
PD4-443083317	A kill entry is installed in an Ethernet Automatic Protection Switching (EAPS) transit switch and temporary flooding is not happening for unknown traffic.
Network Login	
PD4-575731921	Network login clients are not able to get an IP address from an external DHCP server through VR-Mgmt.
OSPF	
PD4-1146158415, PD4-885811009	Deleting ports and unconfiguring IPv6 addresses on a Summit X450a switch causes an OSPFv3 assertion failure.
PD4-299382986, PD4-217017923	When running the `show iproute` command, the actual inter-area route is also shown in the summary route with a virtual link in the command output.
Security	
PD3-74708933	If you are configuring a BlackDiamond 10808 or BlackDiamond 8800 with RADIUS authentication, when telnet or console access is through the master MSM, RADIUS authentication works correctly. However, if console access is through the backup MSM, RADIUS authentication does not work correctly and generates the following error message: `<Erro:AAA.RADIUS.serverNotInit> MSM-B: Authentication server for Switch Management is not initialized`

Table 39: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD3-77983510	Summit X450a and Summit X450e series switches and BlackDiamond 8800 a-series and e-series modules provide more powerful ACL capabilities. Because of this, the amount and complexity of ACL rules will naturally impact the time needed to process and apply the ACL rules to the switch. This will also impact switch bootup time. Access Control List limitations fall into two areas: physical and virtual. Physical Limits—Summit X450a and Summit X450e series switches: The per-VLAN, wildcard (port any), and single-port access list installation limitations are 1024 rules for the Summit X450e and 2048 rules for the Summit X450a. Physical Limits—BlackDiamond 8800 a-series and e-series modules: The per-VLAN, wildcard (port any), and single-port access list installation limitations are 1024 rules for the e-series modules, and 2048 rules for the a-series modules. Extreme Networks recommends that you configure ACLs as per-VLAN, wildcard, or single-port. If either of the following is true, you will have to configure ACLs with multi-port lists: Your application requires that ports do not have a homogeneous ACL policy. When BlackDiamond 8800 original series modules are operational in the same chassis, it may be necessary to configure ACLs to specific port-lists instead of as wildcard or per-VLAN. This is because the original series modules have smaller physical limits. Virtual Limits—Summit X450a and Summit X450e series switches: When configuring a multi-port ACL, use the following guideline. The total ACL count (as calculated by ACL rules times ports applied to) should not exceed 48,000 total ACL rules. For example, applying a 1,000 rule policy file to a 48 port multi-port list is supported (1,000 rules * 48 ports in the list <= 48,000). Virtual Limits—BlackDiamond 8800 a-series and e-series modules: When configuring a multi-port ACL, use the following guideline. For any a-series or e-series blade in the system, its total ACL count (as calculated by ACL rules times ports applied to) should not exceed 48,000 total ACL rules. For example, applying a 1,000 rule policy file to a 48 port multi-port list on an a-series module on slot 1 and an e-series module in slot 2 is fine. Neither module exceeds the 48,000 total ACL rules. Excessive boot times and CPU resource starvation can be seen with larger total rule counts. If your application requires additional capacity, contact Extreme Networks.

Resolved Issues in ExtremeXOS 12.3.4-patch1-3

The following issues were resolved in ExtremeXOS 12.3.4-patch1-3. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.4, and ExtremeXOS 12.2.2-patch1-12. For information on those fixes, see the release notes for the specific release.

Table 40: Platform-Specific and Feature PDs

PD Number	Description
General	

Table 40: Platform-Specific and Feature PDs (Continued)

PD4-1141415551	Software redundant ports become active for a short period of time after performing a save and rebooting the switch.
PD4-1409631701, PD4-334620931	During an MSM or MM failover, an MSDP peer incorrectly prints debug messages in the log as warning messages.
PD4-1571416747, PD4-1562364701	When the *udp-profile* is used to forward traffic to a destination-ipaddress, a memory leak is observed in *ip_dst_cache*.
SummitStack	
PD4-1519887901, PD4-1354693709	In a SummitStack configuration, the switch sends the wrong SNMP traps when the link status of a stacking port changes.
PD4-1374144318	In a SummitStack, when a master node goes down, ELSM status in the neighboring switch goes to a "down" state.
EAPS	
PD4-1102733442	You cannot delete EAPS domains that use the same name but are created using different upper and lower case characters, for example, E777 and e777.
PD4-1206057921	If EAPS ring ports are added to a VLAN before protecting the VLAN from EAPS, the EAPS secondary port may not be blocking the protected VLAN.
OSPF	
PD4-1509196737, PD4-1059134755	An AS external route with a lower type-2 path cost is preferred regardless of whether the originated ASBR is reachable through intra-area or inter-area paths.
RIP	
PD4-1137714021	A RIP routing entry with a metric of 16 shows in the routing table as Active.
ScreenPlay	
PD4-1523522225, PD4-752945069	If the execCLI XML API is run with specifc commands such as top or edit on an ExtremeXOS switch, the switch becomes unresponsive.

Resolved Issues in ExtremeXOS 12.3.4-patch1-1

The following issues were resolved in ExtremeXOS 12.3.4-patch1-1. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.4, and ExtremeXOS 12.2.2-patch1-12. For information on those fixes, see the release notes for the specific release.

Table 41: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-657839005	When stacking redundancy is disabled, the following error message is displayed after executing the *save* command followed by enabling SSH: *<Info:AAA.LogSsh> Slot-1: Msg from Standby Slot 3: Error -1 writing SSH info to System.*
PD4-1350258611	Process exsshd consumes 99% of CPU capacity when executing the *clear session* command. **Workaround:** Restart the exsshd process to restore CPU utilization. You may also close the SSH session properly using the *logout* or *exit* commands instead of the *clear session* command.

Table 41: Platform-Specific and Feature PDs (Continued)

PD4-1466644593, PD4-1142795450	The ExtremeXOS CLI may allow load sharing groups to be formed using ports with different link speeds.
PD4-1090154127, PD4-1435948354	In PIM Dense Mode, IP multicast cache entries that do not have an egress interface are not refreshed in hardware. This may cause “out of sequence” packets, which can result in “pixilation” in IP TV environments every 210 seconds.
BlackDiamond 8800 Series Switch	
PD4-1424690889, PD4-805462597	A slot fails on a BlackDiamond 8800 series switch when enabling dot1p examination inner-tag ports on more than 24 ports in a vMAN.
BlackDiamond 10800 Series Switch	
PD4-1424690513, PD4-1372389633	With PIM snooping enabled on a pure L2 VLAN, PIM snooping entries timeout without being refreshed, even though PIM hello packets are received on the VLAN port. This behaviour is only seen after a BlackDiamond 10808 switch fails over to MSM-B and MSM-A becomes the slave switch.
BlackDiamond 12800 Series Switch	
PD4-1409348401	New thresholds have been implemented on the BlackDiamond 12800 series switch for the following: • CAM Alert • TX PBUS Input Checksum Error Count • TX PBUS 6 Absolute Message Current Buffer Error • RX PBUS RX FIFO Parity Error • TXMI RAM Parity
BlackDiamond 20800 Series Switch	
PD4-822226531	The following error message is logged during an MSM failover on a BlackDiamond 20800 series switch: *<Warn> Function pointer is not supported. Caller: 0x42e6b8 Parm1: 0x107f24a0 Parm2: 0x108490a0*
Summit Family Switches	
PD4-1480581331, PD4-1363562301	Summit X650 switches may show an inconsistency between the kernel FDB table and the FDB manager table.
PD4-1375779431	After enabling stacking on a Summit switch, the switch may go into a reboot loop in some instances.
SummitStack	
PD4-1498389979	When a SummitStack fails over, the nodemgr process on the new master switch may crash due to an assertion failure.
EAPS	
PD4-1248684161	The ExtremeXOS CLI does not prevent a user from enabling BOOTP on an EAPS control VLAN.
PD4-1439946019, PD4-1386102367	When running ExtremeXOS PIM-SM in a multi-access case (that is, an EAPS ring): • A downstream router should not send periodic (S,G) prunes. • Over-riding a PIM-JOIN message is delayed when multiple (S,G) prunes are received.
Network Login	
PD4-1394637690, PD4-1289042980	In web-based Netlogin, the Logout popup window is displayed momentarily then disappears, and the Logout page has the wrong information when logout privilege is disabled.
RIP	

Table 41: Platform-Specific and Feature PDs (Continued)

PD4-1459378967, PD4-1231117748	In RIP, an output route policy is applied to an input route policy internally after changing and refreshing the output route policy file.
ScreenPlay	
PD4-1497877407, PD4-1505780983	A switch may hang on executing the *restart process thttpd* command when the CPU utilization for thttpd reaches 99.9%.
SNMP	
PD4-1504020331, PD4-796910727	Using SNMPv3, a user does not receive a warning message when trying to log on to a switch using the wrong password.
PD4-1440591951	The extremePowerSupplyStatus SNMP variable values in the EXTREME-SYSTEM-MIB are not sufficient to represent the various states of a power supply.
Spanning Tree Protocol	
PD4-1197366638	Ports become active and start forwarding traffic before STP is operational when rebooting.
VRRP	
PD4-1355839871	A switch should not allow a user to telnet to a VRRP VIP if the source address is in a different network from the VRRP VIP network.

Resolved Issues in ExtremeXOS 12.3.4

The following issues were resolved in ExtremeXOS 12.3.4. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.4, and ExtremeXOS 12.2.2-patch1-12. For information on those fixes, see the release notes for the specific release.

Table 42: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-1354618391	The Polycom SPIP 331 phone exceeds the IEEE class power limit for a class 1 device. This feature enhancement removes the ExtremeXOS restriction based on the IEEE Class Power Limit and uses the Class Power Limit as informational only.
PD4-1343978085, PD4-1248394018	Receiving ARP packets on an L2 VLAN that has an IP address that was configured earlier, causes a switch to populate the "rejected IP" field in the output of the show iparp address.
PD4-954492251	After unconfiguring a switch, Legacy CLI commands are not available, even if the module is present.
PD4-1272649157, PD4-828470206	The invalid syntax keyword `tag_name` is added when configuring a syslog target.
PD4-1227733821, PD4-1144174331	ExtremeXOS may corrupt kernel data after changing IP ARP entries on a private VLAN with IP configured on the VLAN. IP ARP entry changes may be caused by a VLAN topology change, which can be caused by EAPS or STP.
PD4-1085211320	VLAN mirroring cannot mirror packets that are ingressing a LAG port when the master port link is disabled.

Table 42: Platform-Specific and Feature PDs

PD Number	Description
PD4-1227274291	In some cases, the output for the `show port <port-list> qosmonitor` command shows the packet transmission for QP4 for the traffic that is redirected using ACL.
PD4-1230649571, PD4-1221696686	ExtremeXOS software is unable to upgrade an ExtremeXOS software license to any switch that has a serial number beginning with 0953x-xxxx using the `enable license file <license-file.xlic>` command. **Workaround:** Enable the license by running the `enable license <key>` command.
PD4-1171267551, PD4-1101461860	The `run msm-failover` command causes the process exsh to crash with signal 6 if any CLI commands are entered during a telnet session.
PD4-809832177	An ICMPv6 “Packet Too Big” message is not sent when discarding IPv6 packets larger than the outgoing ip-mtu.
PD4-1038555578	netTools crashes with signal 11 when a continuous ping is configured for more than 10 SSH or telnet sessions.
PD4-1023079871	Disabling learning on a VLAN results in LACP packets being dropped.
PD4-1156762929	A triggered IGMP query with the wrong 802.1Q tag is sent on a vMAN enabled port.
PD4-1130790465	A switch reboots because a system crash occurs when software is transmitting control packets on a VLAN while the VLAN is bei25ng deleted.
PD4-1193582811	Traffic ingressing a G48T, G48P, G24X, G8X, or 10G4X module that egresses a load sharing member port on a different I/O module is dropped when an 8900-MSM128 module is in use. In the case of a stack that contains an original series Summit X450 and X650, traffic ingressing the Summit X450 that egresses a load sharing member port on a Summit X650 switch is also dropped. Only certain LAG groups are affected, most notably, the first LAG group is not affected.
PD4-1113787037, PD4-1007713804	Disabling learning on a VLAN, or creating a remote mirroring VLAN, causes excessive flooding.
PD4-1150707179, PD4-931823732	A loop occurs after disabling learning on a protected VLAN on an EAPS master. **Workaround:** To stop the loop, disable and enable the EAPS primary port.
PD4-1124774241, PD4-1099203316	Egress vMAN ACLs are not getting matched, even though the traffic matching the ACL match condition is egressing the switch port.
PD4-938840511	CPU utilization threshold cannot be cleared through SNMP. **Workaround:** Run the `disable cpu-monitoring` command.
PD4-1111322167	When running the `disable subvlan-proxy-arp vlan` command on a subVLAN, clients are not able to resolve the ARP request for the superVLANs interface IP address.
PD4-846924113	The CLI command `configure ports` continues to show the unsupported option `all`.
PD4-990080561	In CLI non-persistent mode, modifying a port in a VLAN from an untagged port to a tagged port deletes the port from that VLAN.

PD4-1084010417, PD4-901961135	When an SNTP client is configured, the following log message is displayed every 4,096 seconds:
	`Setting hwclock time to system time, and broadcasting time Tue Aug 18 19:40:00 2009:`
	`Setting hwclock time to system time, and broadcasting time Tue Aug 18 20:48:16 2009:`
	`Setting hwclock time to system time, and broadcasting time Tue Aug 18 21:56:32 2009:`

PD4-950113951, PD4-740925847	The following error message is displayed in the log when adding ports to an ESRP slave VLAN. `<Crit:vlan.err.criticalInfo> MSM-A: Critical Info: sysctlWriteSetting: cannot open file.`
PD4-1021905215, PD4-1013258326	An FDB refresh fails on a port when there is active traffic and a link flap on another port on the switch.

Table 42: Platform-Specific and Feature PDs

PD Number	Description
PD4-977234454	Configuring UPM profiles to include the `show port info detail` command results in the `show profile history` command output showing the status as failed.
PD4-1028753771	The process "exsshd" crashes with a signal 11 error when closing a session window without using the proper logout.
PD4-1087700857, PD4-698458422	PIM DM causes higher bandwidth consumption with multicast when no subscribers exist.
PD4-1084010391, PD4-901582203	The typographical error in the following error message has been corrected: `<Warn:AAA.RADIUS.serverSwitch> MSM-A: Switch to server...`
PD4-1084205109, PD4-1027500181	The `show tech all detail logto file` command does not complete execution.
PD4-980403527, PD4-899333484	The thttpd process CPU utilization increases and HTTP/HTTPS is not accessible if sock/ stress attack is performed on an HTTPS port. This issue persists indefinitely even after a sock/stress attack is removed.

PD4-975759347	When stacking redundancy and telnet access-profiles are configured, the following error is displayed:
	`Connection refused`
	`Connection closed by foreign host.`

PD4-968719352	When running the `terminate process exsshd forceful` command while an SSH session is in progress, the SSH session does not shut down even if it is no longer seen in the output of the `show session` command. When restarting the SSH session using the `start process exsshd` command, the switch appears to hang while waiting for the ongoing SSH session to be terminated.
PD4-929585833, PD4-507170288	Traffic received on an STP/EAPS blocked port is being sent to the CPU if the source MAC address of the incoming packet matches the MAC address of the DUT system.
PD4-963068135	An ExtremeXOS switch reboots with memory depletion for a 128 memory block while loading a flow-redirect configuration.
PD4-955373111, PD4-920567275	Process FDB may die with signal 11 when processing SNMP Get requests for dot1dTpFdbTable.
PD4-995543551	When configuring IP MTU as 9,216, the value is reduced to 9,194 after upgrading to ExtremeXOS 12.1 or later.
PD4-962772344, PD4-924242747	The FDB process may die with signal 11 when the `show fdb statistics` command is executed.
PD4-974227435, PD4-767595507	The log filter is not shown in the output of the `show upm profile <profile-name>` command.
PD4-983772991	The ifMauDefaultType MIB is populated with the wrong value when a switch is running ExtremeXOS 12.3.3 software.
PD4-944885511	Receiving LACP PDUs that are larger than 500 causes the LACP process to die with a signal 11 error.
PD4-943063565	The cliMaster fails with a signal 6 error when running the `show configuration pim` command while PIM is configured with a static CRP.
BlackDiamond 8800 Series Switch	
PD4-1313038681, PD3-190363671	The following error message is displayed while hot swapping PSUs: `Unable to read PSU-2 FRU data. Try reinserting PSU more quickly.` **Workaround:** Remove and reinsert the PSU quickly. Insert the PSU in a single, continuous motion with a firm push. **Note:** This problem is fixed in PSU Controller firmware version 2.18. Run the install firmware command to install the new firmware on the PSU Controller modules.

Table 42: Platform-Specific and Feature PDs

PD Number	Description
PD4-1344770191	Inserting a MSM-G8X module running ExtremeXOS 11.6.1 or earlier software as a backup on a BlackDiamond 8806 chassis with 600/900 W AC PSUs causes the switch to continuously reboot.
PD3-190363671, PD4-1313038681	The following error message is displayed while hot swapping PSUs: `Unable to read PSU-2 FRU data. Try reinserting PSU more quickly.` **Workaround:** Remove and reinsert the PSU quickly. Insert the PSU in a single, continuous motion with a firm push. **Note:** This problem is fixed in PSU Controller firmware version 2.18. Run the `install firmware` command to install the new firmware on the PSU Controller modules.
PD4-1206112163, PD4-1203047506	On BlackDiamond 8800 series switches, the inline power state remains `delivering` on the G48P and G48Pe modules after a powered device is removed from a port.
PD4-1191020319	When a 10M SFP+ passive copper cable is inserted into an 8900-10G24X-c module, it is detected as a 1 Gbps optic instead of a 10 Gbps optic and the port is incorrectly reconfigured for 1 Gbps operation. SFP+ passive copper cables of other lengths do not experience this problem.
PD4-1217032401	When running pings for an L3 interface, ping packets are dropped when IP forwarding is enabled on a BlackDiamond 8800 series switch.
PD4-1198241441	When configuring PIM Sparse mode on a BlackDiamond 8800 original series switch, a memory leak is detected. **Workaround:** Disable multicast route compression by running the `configure forwarding ipmc compression off` command.

PD4-1147533386, PD4-983957922	After running an MSM failover, the backup MSM shows an asterisk in the command prompt after rebooting the switch. To clear this, save the configuration.
	`RT030101_TEST_LAB.2 >`
	`* RT030101_TEST_LAB.2 > show slot`

PD4-1047390381, PD4-910971021	`Port Summary Monitor` timestamps display on a console as part of the `show port <port _list>` command output.
PD4-964896284	When configuring PIM Sparse mode on a BlackDiamond 8800 series switch with c-series I/O modules, a memory leak is detected. **Workaround:** Disable multicast route compression by running the `configure forwarding ipmc compression off` command.
PD4-975082490	EDP information is not displayed when a port is not a member of a VLAN or is tagged.
PD4-936088722, PD4-791316018	When using SCP to download an image, the image fails to install on the backup MSM and the following error is displayed: `Installing to MSM-BError: Failed to install image - tar: / scratch/bd8800-12.1.3.14.xos: No such file or directory.`
BlackDiamond 10800 Switch	
PD4-1272649513, PD4-804225168	ESMI related warning messages are seen in the output of the `show log` command whenever an SSL certificate with a key length of 4,096 is created or the HTTPD process is restarted.
PD4-1035637713	Fans on a BlackDiamond 10800 switch may run at a higher RPM, causing unacceptable noise levels.
BlackDiamond 12800 Series Switch	
PD4-1217032476, PD4-1185696661	A BGP process crash with signal 11 occurs when disabling and enabling a BGP peer with 15,000 routes.
PD4-1243529054, PD4-320452728	Running CLI commands on a BlackDiamond 12800 series switch with an MSM-6R module shows an intermittent delay of 30 to 60 seconds during command execution.

Table 42: Platform-Specific and Feature PDs

PD Number	Description
PD4-1241897589, PD4-1232462236	A hardware error may occur on a BlackDiamond 12800 series switch resulting in a misread on the backplane SerDes FPGAs. This misread is interpreted by the system-health-check as an error, which in turn may cause an I/O module or MSM to be taken offline.
PD4-751999119	When configuring HQoS, traffic goes to the correct traffic queue but is not limited by the meter threshold rate.
PD4-979176301, PD4-832095668	The ACL match condition `ports ingress <port-no>` causes incoming packets to be forwarded to all ports in a VLAN as per the VLAN tag for incoming packets, even though the ingress port is not part of that VLAN.
BlackDiamond 20808 Switch	
PD4-1345342342	A multicast stream with a TTL value 255 is not forwarded, but a multicast stream with a TTL value 2-254 is forwarded correctly.
PD4-1306224691	Multicast traffic is not processed on untagged vMAN ports correctly. For example, • Untagged mulitcast packets are dropped. • If a multicast packet is tagged and matches any existing vMAN tag, the packet is flooded on that vMAN with 8100 ethertype.
PD4-826996622	When a power fan controller stops communicating with a fan tray, the state of the fan tray is displayed as "INVALID_S," which is not a defined state.
PD4-1034364517, PD4-913402141	Process XMLD crashes if multiple "OpenSession" XML requests are sent continuously.
PD4-1056306393	Packets received on an "ESRP host attach" port are dropped on a BlackDiamond 20804 switch when the switch is in ESRP slave mode.
PD4-1027880666	Using two BlackDiamond 20800 series switches acting as a VRRP master and a VRRP backup in an EAPS ring topology, the system crashes with the following error: `epc : c07a2668 kioSendFdb+0x184/0x0 [exvlan]`
PD4-923239211	LACP, round robin, and address-based L2 and L3 algorithms are not supported on a BlackDiamond 20800 series switch and should be blocked in the CLI.
PD4-963878819	When a BlackDiamond 20808 series switch runs an MM failover, or a failover is occurring due to a process failure, too many SNMP traps are generated.
PD4-885510528	Multiport FDB support is not available on a BlackDiamond 20800 series switch in ExtremeXOS software.
PD4-946603143, PD4-872419991	After running the `run diagnostics extended` command on slot1 of a BlackDiamond 20808 switch, slowpath traffic is no longer forwarded to the CPU on slot 1.

PD4-964664834	The following logs are displayed in the master MM when the backup MM is becoming active and the master MM tries to checkpoint the PVLAN data:
	`<Erro:DM.Error> MM-B: hal: cannot create msg DM_MSG_CHKPT_DATA c10b 235c 0x10bbcd00`
	`<Crit:DM.Critical> MM-B: hal Cannot create msg DM_MSG_CHKPT_DATA of size 9052 (too big)`

PD4-973283131	The sys-health-check fails to send data to an inactive port. The sys-health-check packets are dropped because the buffer is full and flow-control is on.
PD4-978263097	During a malfunction of an adjacent node, excessive DHCP traffic is flooded to the switch causing watchdog failures and outages.
PD4-964136923	The following error message is displayed when checkpointing IPv4 ECMP fails because of a data allocation error: `<Crit:DM.Critical> MM-B: hal Cannot create msg DM_MSG_CHKPT_DATA of size 14164 (too big)`
Summit Family Switches	

Table 42: Platform-Specific and Feature PDs

PD Number	Description
PD4-975071348	If a switch is configured with MVR, multicast streams are forwarded on the wrong VLAN after disabling or enabling a tagged port.
PD4-1283244939, PD4-1277806041	An ACL applied to another VLAN is matched even though the ACL is not applied on the ingress ACL.
PD4-1023729033	A Summit family switch is not sending the SNMP traps "extremeFanFailed" and "extremeFanOK."
PD4-1344772361	Reinstalling the "pktcapt.o" debug module causes a switch to crash in certain scenarios.
PD4-1224472731, PD4-1159043191	A data loop occurs in the second VLAN of two protected VLANs when the second VLAN is added using auto-bind. **Workaround:** Reboot both switches.
PD4-1249518348	A test port remains active while the port is disabled and a 10/100/1000BASE-T mini-GBIC and SFP I2C read/write failure 5557 occurs.
PD4-935277568	The error `SFP I2C read/write failure` is seen after disabling a port, and saving and rebooting a 10/100/1000BASE-T SFP module.
PD4-1155294951, PD4-460349822	On Summit X450 switches, 1 Gigabit links take more time to detect a link down than 100 Mbps links.
PD4-772840781	On Summit X450a and X450e series switches, it takes ARP approximately 8 to 190 seconds to resolve after an ESRP failover when the switch is experiencing heavy traffic.
PD4-1062792931, PD4-997419038	When dot1x and MAC-based authentication are both enabled on a port and a user is first authenticated using MAC-based authentication, while dot1x authentication is also running, the response from the RADIUS server is dropped.
PD4-833755352	Auto-negotiation fast link pulse is being sent on a disabled port.
PD4-945047421, PD4-925787371	In RSTP, when a port becomes a root port and an alternate port exists on a bridge, agreement BPDUs are not immediately sent back as per standards.
PD4-970731498	XGM2-2bt modules keep reloading the same firmware to one of the ports when the switch reboots.
PD4-1008998674	A port configuration set to auto on is not retained across reboots.
PD4-942940652, PD4-918730862	Traffic on ports greater than or equal to 28 are not flooded out to stacking ports.
SummitStack	
PD4-1017391818	Rebooting a SummitStack displays the following error message: `Error: Failed to reboot node`
PD4-950113401	Clients connected to a non-master slot in a SummitStack cannot communicate with an ExtremeXOS switch when a port is part of a PVLAN subscriber VLAN, as well as a regular VLAN.
ACL	
PD4-902099498	A policy file created in a Windows environment using empty lines at the end of the policy file shows the error `Incomplete entry in policy <policy-name>` when applying or performing a "check policy." **Workaround:** Run the `edit policy <policy-name>` command and save the policy file. You do not need to change the contents of the policy file.
PD4-1283408459, PD4-1027427581	For ACL counters for IGMP message type, the direct offset is calculated and the protocol type in the IP header is not checked. Therefore, any IP datagram matching the offset is counted as matching. **Workaround:** Set a "protocol igmp" match condition explicitly in the policy file.
PD4-1202787271	A switch may experience traffic loss when it becomes a VRRP master even before flow-redirect ACL is fully loaded.

Table 42: Platform-Specific and Feature PDs

PD Number	Description
PD4-943184892, PD4-809832196	The output for the `show configuration acl` command contains the wrong syntax for meter configuration if the `create meter <meter-name>` command has just been executed.
PD4-983612974, PD4-670315790	When configuring egress ACLs on a load-shared port, the following incorrect error message is displayed: `Duplicate ACL config, Note: Egress ACL need be applied on the Master port only`
PD4-962772412, PD4-852494655	With CLEAR-Flow enabled, CLEAR-Flow ACL threads may be killed by EPM.
ARP	
PD4-1248394018	Receiving ARP packets on an L2 VLAN that has an IP address that was configured earlier, causes a switch to populate the "rejected IP" field in the output of the `show iparp` address.
BGP	
PD4-1243360048	When disabling and enabling a BGP peer with 15,000 routes multiple times, an assertion failure occurs and the BGP process crashes with signal 6.
PD4-1088907253	BGP does not withdraw routes that are not preferred routes from neighbors to which the routes were previously advertised.
PD4-1108149831	The Route Manager crashes when a VLAN through which a network is configured goes down when using the `configure bgp add network` command.
DHCP	
PD4-727955846	DHCP OFFER and DHCP ACK packets are duplicated in a VLAN aggregation setup if a DHCP request is received on a subVLAN.
EAPS	
PD4-573923735, PD3-175211031	The ExtremeXOS CLI does not prevent EAPS health check PDUs from looping using the `permit all` keywords when installing ACLs.
IGMP	
PD4-931040194, PD4-926340897	Even with IGMP proxy enabled, when an IGMP subscriber leaves, the IGMP-leave is forwarded with multiple subscribers on one port.
Network Login	
PD4-909114333	When disconnecting a network login authenticated client who is connected through a dynamically created network login VLAN, process mcmgr crashes and generates the following log message. `***** Process mcmgr pid: 518 died with signal:11`
PD4-962034957	The extremeNetloginPortIfIndex entry in the extremeNetloginAuthFailure trap always sets to 0 with a netlogin authentication failure.
PD4-1059144701, PD4-464577708	A web-based network login client cannot be authenticated using the URL `http://<switch-ip>/hello` or `http://<switch-ip>/login`.
Multicast	
PD4-1113787001, PD4-1008069840	Enabling IGMP snooping globally results in an error for remote mirroring VLANs.
MPLS	
PD4-597078536	Error messages such as `Short MPLS Ping header` may be seen on a DUT when running an MPLS system test.
OSPF	

Table 42: Platform-Specific and Feature PDs

PD Number	Description
PD4-1313201611	OSPFv3 process crashes when an ASBR that was reachable through multiple areas goes down.
PD4-1313201662	Receiving LS updates for an AS-External LSA with an invalid prefix length (a length of 128 or higher) causes the OSPFv3 process to die with signal 11.
PD4-974227565, PD4-896536108	When running OSPFv3 over a 6-in-4 tunnel interface, OSPFv3 treats the interface as broadcast rather than point-to-point.
PD4-934588772	When configuring an OSPFv3 timer, the new configuration may not take affect after a switch reboot.
PD4-929585917, PD4-875793527	Incoming router LSAs with a router link greater than 420, causes the OSPF process to crash with an assertion failure.
QoS	
PD4-1142795366	Configuring a QoS profile for all ports using the `all` keyword fails if load-sharing is configured on the switch.
PD4-1142795366	Configuring a QoS profile for all ports using the `all` keyword fails if load-sharing is configured on the switch.
PD4-819677511	The `show configuration vlan` command may also show the QoS profile configuration for load shared member ports.
sFlow	
PD4-962328921	VRRP advertisement packets are dropped when sFlow sampling is enabled.
SNMP	
PD4-945120604, PD4-888471111	The snmpMaster process experiences memory depletion while sending out AuthFailure SNMP traps. **Workaround:** Disable the AuthenTraps by setting the OID snmpEnableAuthenTraps to value 2 (disabled). `snmpset -v 2c -c snmpEnableAuthenTraps.0 i 2`
PD4-1010444609, PD4-902287187	The EXTREME-V2TRAP-MIB definition misses the “EapsRingPort” at the IMPORTS section. Because of this, the Spectrum NMS fails to compile the ExtremeXOS 12.1.3 MIB file with an error against EapsRingPort.
PD4-950751340	Configuring an SNMP target address using a MIB incorrectly sets the VR option, which results in traps not being sent.
Spanning Tree Protocol	
PD4-1229526361	In some cases, STP ports stay in the blocked state in all the protected VLANs in a specific domain, even though the output of the `show stpd <domain-name> ports` command shows the state as forwarding.
PD4-1238488711	An MSTP port may stick in the listening state after a switch reboot.
PD4-1175895978	Ports in an MSTI instance are not setting to the final state after links flap.
PD4-1197366555	A temporary loop is detected when flapping an MSTP enabled port on a root bridge.
PD4-1101544951	A "new root" trap is always generated when a link up or link down occurs on an edge safeguard port on an MSTP domain.
PD4-851505470	The `show configuration stp detail` command returns a default encapsulation of s0 as emistp instead of dot1d.

Resolved Issues in ExtremeXOS 12.3.3

The following issues were resolved in ExtremeXOS 12.3.3. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.4, and ExtremeXOS 12.2.2-patch1-12. For information on those fixes, see the release notes for the specific release.

Table 43: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-723134513, PD4-717148757	netTools memory utilization increases if the switch is not able to resolve the server IP address for SNTP
PD4-826713926, PD4-539277416	Failsafe account authentication fails when trying to access a switch using SSH by way of a management port.
PD4-698458401	Every 300 seconds, kill entries installed by PIM are not removed from hardware, therefore, traffic for those entries does not hit the CPU.
PD4-888296253, PD4-642569015	On BlackDiamond 10808 and 12800 series switches, when multiport FDB entries are created, the CPU forwarded traffic is always sent to the lowest port.
PD4-852858158, PD4-694359201	Process cliMaster dies with signal 6 in some cases.
PD4-855783054, PD4-769156523	The message `MSM-A: Error while saving "psePort":` is displayed when a `save` command is executed after reconfiguring a slot as a G48te2 (PoE) to G48te2 module.
PD4-843337963, PD4-748079627	The debug log `<Info:thttpd.info> 13 line feeds removed` is not necessary and is shown when configuring a switch with HTTPS.
PD4-750913401	When removing I/O modules from a chassis, the following warning is shown in the log: `<Warn:HAL.Sys.Warning> MSM-A: Sys-Health-Check LinkScan Notification IO : slot 4 unit 0 port 10 link Down`
BlackDiamond 8800 Series Switch	
PD4-819677451	A HAL task failure may occur on the primary or backup MSM of a BlackDiamond 8800 series switch when the VRID value given in the `debug hal show ipv4Mc vrId <vrId>` command is greater than 10.
PD4-882862398, PD4-767856469	After running the save command and rebooting a switch with a VLAN translation configuration, duplicate packets are sent to member VLANs from the translation VLAN.
PD4-860761298, PD4-767590011	A devmgr process crash may occur when the `show version` command is executed.
PD4-843338016, PD4-796910653	The switch stops forwarding traffic after disabling remote mirroring.
BlackDiamond 12800 Series Switch	
PD4-732450009, PD4-519335296	When hot-swapping an I/O module, a DiffServ configuration does not take affect.
PD4-900776871, PD4-735984501	DUT crashes while configuring static routes via 6in4 tunnels.
PD4-856182526, PD4-698686480	Even after a vMAN ethertype is changed using the CLI, packets are egressing out the service vMAN using an older vMAN ethertype.
BlackDiamond 20808 Switch	

Table 43: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-848928281	Downgrading firmware is skipping a fan tray and an XFM module. **Workaround:** Re-run the `download firmware` command.
PD4-930262776	A BlackDiamond 20808 switch with a XM-8XB module experiences a conduit error and displays the error `System Error 0: Conduit Transmit error encountered on slot 6, error 11`.
PD4-904323930, PD4-807083163	Running an MM failover multiple times on a BlackDiamond 20808 switch may result in IPv4 packets being forwarded in software.
PD4-843000831	The counter for the `show traffic queue statistics` command is displayed as "multiple" when ingress ports are on different I/O modules but all ports have the same egress ports.
PD4-890754421	L3 traffic is not distributed among LAG ports if a static FDB is configured on the LAG port of a BlackDiamond 20808 switch.
Summit Family Switches	
PD4-714733578, PD4-505226018	ACL blackhole entries installed during a refresh policy are not removed if a failover occurs during the refresh policy.
PD4-805737411, PD4-805737381	When removing a cable from a 10G port link, it takes more than one-second for the link to go down.
PD4-899256073, PD4-899256065	On a Summit X650 switch, sending two 9,000-byte 800 Mbps streams to a single 10G port fails to trigger flow-control.
PD4-876867214, PD4-814229965	Multicast packets using a system MAC address as a destination MAC address are periodically leaked in slowpath every 30 seconds.
PD4-721785591	BGP takes random amounts of time to update a network entry configured using the `configure bgp add network` command.
PD4-847610826, PD4-805737496	A Summit X450 original-series switch only supports 511 LPM routes.
PD4-863357868, PD4-788067297	Multicast traffic is not forwarded after rebooting a standby switch in a stack.
SummitStack	
PD4-842190957	In a SummitStack configuration, slot 1 does not always become the master slot even though the priority is set to `auto`.
PD4-841494144	Packet drops are seen when bi-directional L2 unicast traffic is sent with LACP configured.
PD4-822468442, PD4-803423872	An overheated SummitStack fails, but the ports remain active and traffic continues to be forwarded.
PD4-831044321	Connecting Summit X650 switches in a series causes an L2 loop.
ACL	
PD4-728518133, PD4-556568561	L4 access control list (ACL) rules are also being applied to fragmented packets.
ESRP	
PD4-856338638, PD4-729030981	A port restart occurs on ports that are enabled for ESRP port restart, even though an ESRP state change has not occurred.
Network Login	
PD4-843130728	Network login users are not authenticated if the "Tunnel-Private-Group-ID" attribute value is set to 0 on a RADIUS server.
PD4-837165339	Unconfiguring a guest VLAN port on a non-guest VLAN port removes the guest VLAN configuration from all ports.

Table 43: Platform-Specific and Feature PDs (Continued)

PD Number	Description
OSPF	
PD4-826713138, PD4-241726909	If two routers, both reachable from one another, originate functionally equivalent AS external LSAs (same destination, cost, and non-zero forwarding address), the LSA originated by the router having the highest OSPF router ID is used. The router having the lower OSPF router ID can then flush its LSA. However, an ExtremeXOS switch does not purge the functionally equivalent AS external LSA when an Extreme OSPF router ID is lower.
PD4-861837533, PD4-767590126	In a jumbo frame environment, an OSPFv3 neighbor gets stuck at EX_START.
PD4-831651159, PD4-701099374	Setting the ospfSetTrap OID mib-2.14.16.1.1.0 to 0x0000ffff does not cause OSPF to send out OSPF traps.
ScreenPlay	
PD4-860761571, PD4-774800225	ScreenPlay shows the wrong port speed after setting autonegotiation to off and on because the XML API returns the incorrect configuration speed after disabling and enabling autonegotiation.
SNMP	
PD4-776994136, PD4-747221911	Changing the storage type of default SNMP objects (Communities/Users/Groups/Access) to “non-volatile” allows a user to delete these default SNMP entities like any other user created entity.
PD4-1155806081, PD4-935076380	When a switch receives UDP packets with a source port of 3503, memory depletion occurs and the switch may reboot.
Spanning Tree Protocol	
PD4-814770957	An STP topology change triggers EAPS to flush FDBs and send FlushFdb PDUs despite the fact that none of the STP protected VLANs are participating in EAPS.
VRRP	
PD4-855539430	When ping-tracking is enabled for VRRP, VRRP performs the failover based on a cumulative ping-track failure instead of consecutive ping-track failures.

Resolved Issues in ExtremeXOS 12.3.2-patch1-4

The following issues were resolved in ExtremeXOS 12.3.2-patch1-4. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.4, and ExtremeXOS 12.2.2-patch1-12. For information on those fixes, see the release notes for the specific release.

Table 44: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-876867265, PD4-862521622	Receiving bootstrap packets with a "Fragment Tag" field set to zero causes memory depletion in the PIM process when processing subsequent bootstrap packets.
PD4-899492631, PD4-505794657	Repeatedly running multiple commands from a telnet session causes memory depletion in the exsh process.
BlackDiamond 8800 Series Switch	

Table 44: Platform-Specific and Feature PDs (Continued)

PD4-882862398, PD4-767856469	After running the `save` command and rebooting a switch with a VLAN translation configuration, duplicate packets are sent to member VLANs from the translation VLAN.
BlackDiamond 12800 Series Switch	
PD4-907885686, PD4-907885450	SerDes register values have been corrected for optimum performance.
PD4-882862598, PD4-852419857	Creating and deleting HQoS queues on a BlackDiamond 12808 results in the following error: `Error: Timeout awaiting Traffic Queue operation.`
PD4-882862491, PD4-723664780	After performing a hitless upgrade from ExtremeXOS 12.0 or later to ExtremeXOS 12.1 or later, packets are sent to the CPU for L3 switching, even though hardware entries exist for the destination IP.
Summit Family Switch	
PD4-911212165	Changing L3 adjacency between trunked and non-trunked ports causes traffic to be forwarded incorrectly.
PD4-876867214, PD4-814229965	Multicast packets using a system MAC address as a destination MAC address are periodically leaked in slowpath every 30 seconds.
SummitStack	
PD4-901753797, PD4-547591482	Performing an snmpwalk on OID 1.3.6.1.4.1.1916.1.4 (enterprises.extremeAgent.extremePort) on a stack returns the error `No Such Object available on this agent`.
CLEAR-Flow	
PD4-850771907, PD4-715440365	Starting CLEAR-Flow triggers adding or removing mirror action and shows the following error: `<Erro:HAL.IPv4ACL.Error> MSM-A: ACL filter update reinstall failed unit 2, rv -15`
Network Login	
PD4-870861478, PD4-765586466	Network login enabled ports are authenticating the switch MAC address in certain loopback configurations.
PD4-922865938, PD4-823485808	Limit-learning does not show the blackhole entries if network login is enabled on the same port.
ScreenPlay	
PD4-902392453, PD4-776663281	ScreenPlay does not load management information. It just prints “Loading” for the “Management”information on the dashboard tab.

Resolved Issues in ExtremeXOS 12.3.2-patch1-2

The following issues were resolved in ExtremeXOS 12.3.2-patch1-2. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.4, and ExtremeXOS 12.2.2-patch1-12. For information on those fixes, see the release notes for the specific release.

Table 45: Platform-Specific and Feature PDs

PD Number	Description

Table 45: Platform-Specific and Feature PDs (Continued)

BlackDiamond 20808 Switch	
PD4-852419538	The link on a 10GE port remains active when the Tx fiber is removed from a BlackDiamond 20808 switch while the Rx fiber remains connected.
EAPS	
PD4-861919266	Expected traffic convergence time for EAPS has increased after upgrading from ExtremeXOS 11.6 to ExtremeXOS 12.0, resulting in more traffic loss.

Resolved Issues in ExtremeXOS 12.3.1-patch1-2

The following issues were resolved in ExtremeXOS 12.3.1-patch1-2. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.4, and ExtremeXOS 12.2.2-patch1-12 For information on those fixes, see the release notes for the specific release.

Table 46: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-805055301	When a single port is configured for WAN PHY, the `show configuration vlan` or `show configuration` commands display all ports having a WAN PHY configuration.
PD4-807354489, PD4-807354471	On a Summit X650-24t (Hardware Revision 2) packets are received on a port even before the port is fully operational.
PD4-795645186	Software support for Summit X650-24t (Hardware Revision 2.)

Resolved Issues in ExtremeXOS 12.3.1-patch1-1

The following issues were resolved in ExtremeXOS 12.3.1-patch1-1. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.3, and ExtremeXOS 12.2.2-patch1-8. For information on those fixes, see the release notes for the specific release.

Table 47: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-779588691	An FDB process crash occurs after enabling an LACP LAG.
PD4-788565690, PD4-751294438	A PVLAN subscriber VLAN side device cannot reach a network VLAN side device.
PD4-774654053	A 10GE module fails silently followed by a silent MSM failover.
VRRP	

Table 47: Platform-Specific and Feature PDs (Continued)

PD4-804341479, PD4-796161449	System memory is depleted when non-ICMP IP packets are sent to a VRRP virtual IP address.

Resolved Issues in ExtremeXOS 12.3.2

The following issues were resolved in ExtremeXOS 12.3.2. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3.2 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.3, and ExtremeXOS 12.2.2-patch1-8. For information on those fixes, see the release notes for the specific release.

Table 48: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-780238601, PD4-500100211	The “vi” process may crash when performing a cut/copy/paste of text that is larger than 10,492 bytes.
PD4-762749887, PD4-504813986	In a DNS server, if the RADIUS server IP address is specified as CNAME, that is, Alias, a switch is not able to resolve the IP address correctly.
PD4-817311836, PD4-507170653	Policy files containing 850 entries with flood-groups causes an Extreme Process Manager (EPM) watchdog reboot.
PD4-776749028, PD4-581257425	An error occurs when loading an ExtremeXOS 12.1 or earlier software configuration file if the banner configuration contains a new line character.
PD4-772344728, PD4-688252511	Some hosts are no longer reachable after removing an active MSM-B in a cross module link aggregation setup. **Workaround:** Disable and re-enable the load-shared port.
PD4-771508188, PD4-699307521	When running the show ports stack-ports rxerrors command, the "RX Over" count continuously increments, even without user traffic.
PD4-804106484, PD4-774654053	A 10GE module fails silently followed by a silent MSM failover.
PD4-762749838, PD4-541064246	When configuring rate-limiting on a switch, the max-burst-size value is not reset after reconfiguring the switch.
PD4-778917991, PD4-684400473	A switch does not generate high CPU utilization log messages after executing the `clear cpu-utilization` command, even if process CPU utilization goes above the threshold value.
PD4-713872481, PD4-686876515	When broadcast IP forwarding is enabled on a default VLAN forwarding is disabled after a system reboot.
PD4-778918231, PD4-605137688	The drop counter for FDB entries is not updated and no log message is generated to indicate a hash collision or table full error.
PD4-805462251, PD4-701906049	Running the `configure sys-recovery-level` command resets a switch to the factory default after disabling and enabling a G48Xa I/O module.
PD4-780725573, PD4-779916611	When a static entry is added to a configured domain, the entry is also added to another domain.
PD4-818402789, PD4-772840867	An Extreme Networks switch ignores the string "priv_lvl" in a TACACS authorization reply packet.

Table 48: Platform-Specific and Feature PDs (Continued)

PD Number	Description
PD4-758069347, PD4-630233676	After performing a hitless upgrade, the `show version` command output still shows the old master filename, not the new image. However, the `show switch` command output shows the correct image.
PD4-746850491	When the syslog target format is configured as yyyy-mm-dd, log messages are still sent using the format yyyy/mm/dd.
PD4-786082082, PD4-795451285	After disabling flooding for broadcast traffic, the broadcast traffic originated from the switch is not flooded out.
PD4-772160965, PD4-556797775	The `show access-list meter ports x` command returns all meters on the switch, not just the one associated with `ports x`.
BlackDiamond 8800 Series Switch	
PD4-679400400	If you run “msm-failover” or diagnostics on a master MSM on a BlackDiamond 8806 chassis with a 8900-10G24X-c module present, you may see error messages in the logs similar to the following: `<Erro:HAL.Port.Error> MSM-B: aspenCardPortLinkscanHandler(): port mapping failed for unit 52 port 25.` The error messages do not impact switch performance and can be ignored.
BlackDiamond 12800 Series Switch	
PD4-757850252, PD4-569838439	Packets that need to be L2 switched are not egressing if the packets hit the IPv4 ACL containing a redirect action. This fix requires a regular upgrade on a BlackDiamond 12804 switch. It will not work if you attempt a hitless upgrade on the BlackDiamond 12804 switch.
BlackDiamond 20808 Switch	
PD4-855198841	A BlackDiamond 20808 I/O module goes into a powered off state after downgrading the firmware.
PD4-791694541	Additional log messages are needed when the PSU temperature hits the warning range, which is 40 degrees C to 49 degree C. This is a warning that the ambient temperature is getting too hot.
PD4-789754441	A BlackDiamond 20808 process crash occurs when running the `debug hal show device packet-processor printXCounters` command with an invalid parameter ID.
PD4-808019965,	Packets ingressing load-shared member ports in a BlackDiamond 20808 switch are not egressing out using "fdb" entries reachable through a VPLS tunnel.
PD4-779872607	The fan tray stops responding resulting in a long timeout. When ExtremeXOS needs fan tray information, the PFC queries the fan tray. The long timeout on the PFC side causes ExtremeXOS to timeout, which delays all of its other processes, resulting in a failure.
SummitStack	
PD4-821706998, PD4-811997761	In some scenarios, the following is seen on a fully loaded SummitStack with non-Extreme optics: `pibConduitRcvMsg: no magic number (0x0) slot number 6, tcp port 5003 [socket buffer length 8,Message version 0, opcode 0, length 0]` This is followed by a HAL process crash. A consistent flapping, receive loss of signal condition, can fill up the conduit queues.
PD4-770795498, PD4-623659132	After a SummitStack failover, the new master node is not reachable using an alternate IP address or gateway.

Table 48: Platform-Specific and Feature PDs (Continued)

PD Number	Description
ACL	

PD4-773570063, PD4-629923298	If a dynamic ACL is applied to ingress and egress to two or more interfaces (port or VLAN), the configure access-list delete all command does not delete the dynamic ACL from all interfaces.
	Workaround: Manually delete the dynamic ACL from each port or VLAN using one of the following commands:
	`configure access-list delete ping port <port-list>`
	`configure access-list delete ping vlan <vlan-name>`

PD4-762092248, PD4-667212313	If the `refresh policy` command is invoked by adding more entries to the policy file, then after unconfiguring that specific ACL, an ExtremeXOS switch starts logging messages such as: `Denied packet on ingress interface vlanIf=1000223 slot=1 port=1, too many ACL's & packet rate is too high" and start to drop all the packets received in slow path.`
PD4-778918022, PD4-738207292	Access-profile configurations for SNMP and SSH modules are not available in the `show configuration` command output.
PD4-778918166, PD4-641467077	The telnetd process crashes with signal 11 when the same policy file is used in a telnet access-profile and an ACL.
CLEAR-Flow	
PD4-818833708, PD4-512656071	A HAL process crash occurs when HQoS is used with CLEAR-Flow and CLEAR-Flow rules are enabled.
DHCP	
PD4-779435690, PD4-717000351	An error message should be displayed when adding a subVLAN to a superVLAN if DHCP client or BOOTP client is enabled on the subVLAN.
EAPS	
PD4-770418764, PD4-682475164	IPv6 neighbor discovery packets sent to the CPU are affecting EAPSv2 PDUs, resulting in the following message: `EAPS Shared Port: Segment timer expired.`
PD4-778445090, PD4-627092945	When a shared port is configured prior to enabling an EAPS domain, the EAPS protected VLAN does not block the secondary port in some cases.
ESRP	
PD4-775116218, PD4-631761683	When ESRP is disabled, clients using an ESRP virtual IP address as a default gateway are not able to communicate outside the VLAN.
Network Login	
PD4-770418608, PD4-684538103	Running the `save configuration` command causes a memory leak in the netlogin process.
OSPF	
PD4-778086791, PD4-707855673	OSPF stops translating external routes after deleting a static route to the same destination IP address.
PD4-760942817, PD4-759590041	After a port in a VLAN is added to an OSPF area, it takes about four seconds to update a neighboring switch.
PoE	
PD4-779393568, PD4-717931715	After upgrading a PoE capable ExtremeXOS switch from software version ExtremeXOS 11.6 to 12.1, the `show configuration poe` command is not available.
PD4-779435653, PD4-707855726	The `configure inline-power budget` command is not supported on Summit family and SummitStack switches.

Table 48: Platform-Specific and Feature PDs (Continued)

PD Number	Description
QoS	
PD4-807111909, PD4-807111891	The QoS profile configuration command is not displayed in the output of the `show configuration vlan` command for the learning-domain vMANs.
PD4-828265339, PD4-805461986, PD4-537092174	Enabling diffserv examination on Summit family or BlackDiamond 88000 series switches causes dot1p replacement of 802.1q tagged packets.
ScreenPlay	
PD4-817159826	The following message is periodically logged when the Event Log screen is left open in ScreenPlay: Login passed for user admin through xml (::)
STP	
PD4-822468490, PD4-538752306	The `load script` command displays an error if the script file contains Multiple Spanning Tree Protocol (MSTP) configurations.
VRRP	
PD4-767558378, PD4-629585032	VRRP backup does not return the real IP address of the VRRP master for the SNMP object vrrpOperMasterIpAddr.

Resolved Issues in ExtremeXOS 12.3.1

The following issues were resolved in ExtremeXOS 12.3.1. The numbers shown in column one of the following table are for internal reference and can be ignored. ExtremeXOS 12.3 includes all fixes up to and including ExtremeXOS 11.1.4.4, ExtremeXOS 11.2.3.3, ExtremeXOS 11.3.4.5, ExtremeXOS 11.4.4.7, ExtremeXOS 11.5.2.10, ExtremeXOS 11.6.5.3, ExtremeXOS 12.0.5, ExtremeXOS 12.1.3, and ExtremeXOS 12.2.2-patch1-6. For information on those fixes, see the release notes for the specific release.

Table 49: Platform-Specific and Feature PDs

PD Number	Description
General	
PD4-438482720	When a (*,G) entry is removed, the hold timer should be restarted for the next maximum hold time.
PD3-207678214	The user-configured banner remains active when rebooting a switch without first saving the configuration.
PD4-715297301	Uninstalling an SSH module causes a switch to fail.
PD4-549307711	The command output for the `show fan` command shows an incorrect FRU_Error.
PD4-730988500, PD4-488646640	In some instances, vMAN configuration commands are displaying as VLAN configuration commands in the output of the `show configuration` command. For example, `configure vman vman2 qosprofile QP3` displays as `configure vlan vman2 qosprofile QP3`.
PD4-730988476, PD4-488295907	For BlackDiamond 8800 and Summit platforms, the ExtremeXOS CLI currently allows using the same vMAN Ethertype for both the primary and the secondary Ethertypes.
PD4-735566061, PD4-623659052	The extremeFdb MIB entry last-updated field is not updated after adding extremeFdbMacExosFdbTable to the extremeFdb MIB.

Table 49: Platform-Specific and Feature PDs (Continued)

PD4-732017639, PD4-576392401	The `upload debug` command returns the error `Error: tftp: The: Unknown host` and the upload fails if the SNMP sysname contains spaces.
PD4-726580975, PD4-498613775	A HAL crash with signal 11 error occurs on stacking platforms after running diagnostics on one of the stacking nodes.
PD4-731919002, PD4-623659203	The xml-mode process dies with signal 11 when an “execConfig” XML API request is received.
PD4-734167511, PD4-422347775	Interrupting the `ping` command initiated from an ExtremeXOS switch by pressing CTRL+C may cause a “cliMaster” process to crash with signal 11 when a user exits that CLI session.
PD4-469889565, PD4-274249122	If a Summit switch populated with an XGM2-2bt module is rebooted, a false link up is seen on 10G links connected to the XGM2-2bt ports approximately 30 to 50 seconds before the switch has fully booted.
PD4-313453484	A 1 Gigabit port link flaps twice when configuring `auto off speed 1000 duplex full`. This does not occur when configuring `auto on`.
BlackDiamond 8800 Series Switch	
PD4-751617335	On a BlackDiamond 8810, when pulling out the backup MSM-A, the master MSM-B could not forward EAPS controlling messages (Hello PDU).
PD4-720590791	Traffic does not resume forwarding after disabling and enabling a VLAN or port on a BlackDiamond 8900 series module G96T-c on some slots.
BlackDiamond 10808 Switch	
PD3-14127903, PD3-13538171	Mirrored egress packets are being sent to the mirror port even when the port is in the link down state.
BlackDiamond 12800 Switch	
PD4-736301853, PD4-435982111	A BlackDiamond 12808 series switch may, in some cases, experience the wrong CLEAR-Flow rule trigger and associated actions.
PD4-444211398	Hotswapping multiple I/O modules during an MSM soft reboot causes an I/O failure.
PD4-466153001, PD4-488754250, PD4-483661511	When configuring 20,000 learned IP Address Resolution Protocol (ARP) entries, only 8,000 IP hosts are sent.
PD4-421365551	When sending bidirectional L2 traffic between two ports, the FDB table shows the MAC address as "unknown."
PD4-462788985	An MSM failover from MSM-A to MSM-B with multiple Ethernet Automatic Protection Switching (EAPS) domains causes a continuous loop with Internet Group Management Protocol (IGMP) traffic.
PD4-458894821	Sending bidirectional line rate traffic between two pairs of ports causes a drop in traffic rate.
PD4-413420051	Hot swapping multiple I/O modules at one time causes most of the I/O modules to be stuck in a failed state.
PD4-463434121	Disabling and enabling a primary port multiple times causes traffic to continuously loop.
BlackDiamond 20808 Switch	
PD4-528151231	A BlackDiamond 20808 switch crashes when configuring 10,000 IGMPv3 receivers and 5,000 streams and then running the `disable ports all` and `enable ports all` commands.
PD4-679461441	When installing firmware using the `install firmware` command on a partially loaded chassis the installation skips both fan tray upgrades and proceeds to upgrading the MMs. Note: To ensure all fans are operational, run the `show fans` command before running the `install firmware` command.
PD4-679154680	Booting up a BlackDiamond 20808 switch may take as long as 700 seconds in same cases.

Table 49: Platform-Specific and Feature PDs (Continued)

PD4-594067381	During a firmware upgrade, one or more of the I/ O modules may get stuck in a booting state during the TFTP download process. After the firmware upgrade is complete, ExtremeXOS software reboots the switch and the I/O modules should become operational within 5 to 10 minutes. If this does not occur, run the firmware upgrade again on those I/O modules only.
PD4-678584893	An error message on the MM while upgrading firmware causes a communication break with the uC resulting in an inability to see the uC version. This does not impact system performance.
PD4-677367811	Some I/O modules in a fully populated chassis with mixed firmware may fail after a system reboot **Workaround:** Hot swap the failed modules.
PD4-676629197	After hot-swapping an MM-A or power cycling a BlackDiamond 20808 switch, the command output of the `show power budget` command shows incorrect power data for MM-A or MM-B.
PD4-672900303	When creating a VLAN in a user defined VR, an error relating to exceeding the maximum buffer queue is seen. `<Crit:Kern.Emergency> MM-A: r.(1578) kioSendNeighbo ur() Exceeded max r.(1578)` This does not impact system performance.

PD4-702644654	The system log displays warning messages when moving a cable from one port to another.
	`<Info:vlan.msgs.portLinkStateUp> MM-A: Port 6:15 link UP at speed 1 Gbps and full-duplex`
	`<Warn:HAL.SysHC.PktPrcssrExcpt> MM-A: Serdes Group 1 exception in packet`

PD4-681012111	When adding a new rule to a policy file with a match condition of `any`, the new rule and the existing rule are not hit by the ACL counters. **Workaround:** Reboot the switch.
PD4-672070469	Power cycling a chassis or reseating an XFM-1 module causes the XFM-1 module to not display when running the `show version` command. The following critical error is also shown in the log. `<Crit:HAL.Fabric.Critical> MM-A: pioennerBringDownFE200 Bringing Down FE200 on XBAR 4 as the command EXTRUC_FE_READ_CMD Failed, Reason: UCPIPE_ERROR` This issue is intermittent and only occurs one out of 10 times. **Workaround:** Reseat the XFM-1 module or reboot the chassis.
PD4-679154651, PD4-681011831	When rebooting a BlackDiamond 20808 switch, MM-A gets stuck in INIT state.

PD4-679100154	During one out of 9 power cycle tests on a fully loaded chassis with 10GX modules, three of the 10GX modules reboot twice before becoming operational. These modules stick in TFTP boot and reboot again. The following error messages are seen on the MM console.
	`<Warn:DM.Warning> MM-A: Slot-3 FAILED (1) CardExec (state BOOTING) timed out`
	`<Warn:DM.Warning> MM-A: Slot-3 Timeout in state BOOTING Please see attach log for detail`
	`<Warn:DM.Warning> MM-B: Slot-3 FAILED (1) Error on Slot-3`

PD4-676312796	When hot swapping multiple I/O modules while continuing to send ARP request traffic to a 10GX module, after all I/O modules boot up, slot 7 shows as failed on MM-B, but shows as operational on MM-A.
PD4-585104810	Ports are not getting the line rate as expected when no weights are configured for a QoS profile.
PD4-418743921	Booting a BlackDiamond 20808 switch with an XM-8XB module takes 4 minutes after disabling and enabling the I/O slot.

Table 49: Platform-Specific and Feature PDs (Continued)

PD4-461858543	In certain situations, a BlackDiamond 20808 is unable to send line rate multicast traffic.
Summit Family Switches	
PD4-736302244, PD4-445637097	When configuring sampling rates lower than the 256 default value, the `show sflow configuration` command automatically rounds up the configured sample rate to 256.
PD3-209191744	After running the `disable port all` command on a switch that is configured with a redundant port, the link state may not always be correct.
PD4-272143930	The LED for port 49 of a Summit X350-48t switch does not light when an XGM2-2sf or XGM2-2bt module links up. This also occurs on the front and back LEDs except for port 50, which lights.
EAPS	
PD4-326832374	Streams are flooded in all active ports for the temporary flood duration after running the `restart ports all` command because a kill entry is not getting installed.
IGMP	
PD4-733921591, PD4-308157118	When IGMP snooping is disabled, ingress multicast data packets are not forwarded when vMAN Ethertype is 0x8100. **Workaround:** Set the vMAN Ethertype to default (0x88a8).
Mirroring	
PD4-350969111	With bidirectional traffic running, when adding multiple ports simultaneously to a remote VLAN in an intermediate switch, traffic is not forwarded to the destination port. **Workaround:** In an intermediate switch, add ports one by one to the remote VLAN.
MPLS	
PD4-475414342	Most Virtual Private LAN Services (VPLS) instances stay in the Ready state after disabling and enabling an I/O module. **Workaround:** Disable and enable `vpls all`.
Multicast	
PD4-466821462	Certain Multicast Source Discovery Protocol (MSDP) multicast streams are not received when the `msdp sa-cache` entry is correct, but no Protocol Independent Multicast (PIM) cache entries are received.
PD4-438482687	When Protocol Independent Multicast (PIM) receives a prune from a downstream neighbor, the prune hold time is not considered. This is the time for which the upstream neighbor should hold the prune.
PD4-438482713	When creating a (S,G) entry from a (*, G) entry, start the entry timer based on the (*, G) egress hold time.
PD4-438482695	Protocol Independent Multicast (PIM) cache timeout should not be determined by the configured join/prune interval on a VLAN.
PD4-584325495	Multicast traffic is dropped after running the `restart port all` and performing a failover.
PD4-730988452, PD4-634273041	When an ExtremeXOS switch receives bursty IP multicast traffic, IGMP snooping entries for some of the multicast streams are not created. Because of this, those IP multicast streams are not egressing the switch, resulting in traffic loss.
PD4-573403233	The MIB igmpCacheSelf from the SNMP MIB shows a value of "false" for reports that are statically added to a switch.
PD4-478198808	After disabling and enabling Protocol Independent Multicast (PIM) in a rendezvous point (RP), kill entries are not restored.
PD3-200659931	In a worst case scenario, after a failover, traffic may take 210 seconds to recover on a switch with a PIM DM configuration.

Table 49: Platform-Specific and Feature PDs (Continued)

PD3-139683642, PD3-16451411	The output of the `show pim` command displays the cumulative counter for the PIM register in/out and the register-stop in/out. When the ExtremeXOS switch is a first-hop router, it sends out the real register first. After a particular mroute has been established, PIM then periodically sends the null-register. The "Register out" field does not count real registers; it only counts null-registers.
PD3-62778911	With MVR enabled on a BlackDiamond 8800, when the ingress port is on the egress-list this causes a high volume of traffic loss.
PD4-235071630	Direct routes are not stored in the multicast routing table, which may cause problems processing anycast rendezvous points (RPs).
Network Login	
PD4-731688845, PD4-435524161	A network login client is not moved to an authentication-failure VLAN in specific configurations.
PD4-726362182, PD4-507339161	If the first dot1x login fails, network login remains in an aborted state even after a successful login.
PD4-422918807	When an extension switch is connected between a DUT and clients, the Extreme Discovery Protocol (EDP) MAC address is seen as the client in the network login port.
QoS	
PD4-259174051	The `clear counters` command does not clear dos-protect statistics.
PD3-202190332	Configuring HQoS allows multiple egress queues to be linked to a single ingress allow-egress queue.
Security	
PD3-133763260	A new backup MSM reboots twice after failover (`run MSM-failover`). The backup MSM initially comes up correctly but is not in the "In SYNC" state. The MSM then reboots without a core and comes up "In Sync" on a BlackDiamond 8800. This problem does not occur consistently and should not affect data transmission. It is recommended that you disable the notify function in the `disable ip-security anomaly-protection notify` <`log` | `cache` | `snmp`> command to avoid potential problems.
sFlow	
PD4-736301731, PD4-446885634	sFlow samples every unicast and multicast packet received on sFlow-enabled ports after CPU throttling sets the sampling rate to a maximum of 536870912.
SNMP	
PD4-731918962, PD4-526154842	SNMP Get for ipRouteTable (OID 1.3.6.1.2.1.4.21) takes hours to complete when a switch has approximately 260,000 IP routes.
PD4-736121757, PD4-487059068	The SNMP GetNext for the extremeAclListTable MIB causes the ACL process to die with a signal 6 error.
PD3-206632121	On a Summit X450a series switch, running an SNMP query for the extremePortQosStatsTable object identifier returns a value of 0. This should return the actual number of packets counted.
Spanning Tree Protocol	
PD4-484447829, PD4-344322578	After a Spanning Tree Protocol Domain (STPD) priority change of an existing root bridge for MSTP, the topology may become unstable and may not settle.
PD4-596946835, PD4-597296541	A link flap of an edge safeguard enabled port causes a switch to generate a “Topology Change” STP BPDU, even if the attached device is not STP compatible.